

**Town and Country Planning Act 1990
(as amended)
S78 Appeal**

**Statement in support of planning obligations sought towards
Hertfordshire County Council (non-highways) services**

Appeal by HG Group under S78 of the Town and Country Planning Act 1990 (as amended) against the decision of Welwyn Hatfield District Council to refuse planning permission in respect of the Full planning application for the demolition of existing buildings and construction of 289 residential units (Use Class C3) and community hub (Use Class E/F.2), with public realm and open space, landscaping, access, associated car and cycle parking, refuse and recycling storage and supporting infrastructure.

Biopark, Broadwater Road, Welwyn Garden City, AL7 3AX

Trish Lyons BSc (Hons), MA, MRTPI

Senior Planning Officer

Growth and Infrastructure Unit

On behalf of Hertfordshire County Council (non-highways) services

04.05.2022

Appeal Ref: APP/C1950/W/22/3294860

LPA Ref: 6/2020/3420/MAJ

Contents

1. Introduction
2. Planning Policy Context
3. Justification
4. Education Provision – Background Information
5. Primary Education Provision
6. Secondary Education Provision
7. Special Educational Needs and Disabilities Provision
8. Nursery Provision
9. Childcare Provision
10. Youth Provision
11. Library Provision
12. Waste Provision
13. Monitoring Fees
14. Fire Hydrants
15. Audit Trails and Monitoring
16. Summary and Conclusions

Appendices

- A. **Planning Obligations Guidance – Toolkit for Hertfordshire** (Hertfordshire County Council, January 2008)
- B. **Welwyn Hatfield Borough Council Development Management Committee Report** (Welwyn Hatfield Borough Council, 9 September 2021)
- C. **Hertfordshire County Council responses to application 6/2020/3420 – S106 contributions requirements** (Hertfordshire County Council)
 - C1 - 4 February 2021 (fire hydrants),
 - C2 - 5 February 2021(GIU response); &
 - C3 - 31 August 2021 (revised development mix response)
- D. **Hertfordshire County Council Guide to Developer Infrastructure Contributions** (Hertfordshire County Council, 2021)
- E. **Hertfordshire County Council Cabinet Meeting Minutes** (Hertfordshire County Council, 12 July 2021)
- F. **A Guide to the Hertfordshire Demographic Model** (Hertfordshire County Council, 2021)
- G. **Hertfordshire County Council Pupil Yield Survey – Methodology for a census of residential mainstream pupil yield from new build housing developments within the boundary of Hertfordshire** (Hertfordshire County Council, 2021)
- H. **Securing developer contributions for education** (Department for Education, November 2019)
- I. **Local Authority School Places Scorecard Costs** (Department for Education, 2019)
- J. **Hertfordshire County Council Guide to Developer Infrastructure Contributions – Technical appendix 3: Education (Mainstream Schools)** (Hertfordshire County Council, 2021)
- K. **Primary pupil planning area – 12.3 Welwyn Garden City West & 12.4 Welwyn Garden City East** (Hertfordshire County Council)
- L. **Secondary pupil planning area – 12.0 Welwyn Garden City** (Hertfordshire County Council)
- M. **SEND Special School Place Planning Strategy 2020-2023** (Hertfordshire County Council, Autumn 2020)
- N. **Hertfordshire County Council Guide to Developer Infrastructure Contributions – Technical Appendix 4: Education (Special Schools and Specialist Provision)** (Hertfordshire County Council, 2021)

- O. **Hertfordshire County Council Guide to Developer Infrastructure Contributions – Technical Appendix 2: Education (Early Years)** (Hertfordshire County Council, 2021)
- P. **Hertfordshire County Council Guide to Developer Infrastructure Contributions – Technical Appendix 5: Youth Connections** (Hertfordshire County Council, 2021)
- Q. **Hertfordshire County Council Guide to Developer Infrastructure Contributions – Technical Appendix 6: Libraries** (Hertfordshire County Council, 2021)
- R. **Hertfordshire County Council Guide to Developer Infrastructure Contributions – Technical Appendix 8: Fire and Rescue Service** (Hertfordshire County Council, 2021)

1.0 Introduction

- 1.1 This statement has been produced by Hertfordshire County Council (HCC) in order to assist the Inspector in considering the acceptability of the (non-highways) Section 106 (S106) planning obligations sought by HCC in order to mitigate the impact of the development at Biopark, Broadwater Road, Welwyn Garden City, AL7 3AX (planning application reference number 6/2020/3420/MAJ).
- 1.2 It is widely recognised that some developments may impact on infrastructure and services and that planning obligations should be made to mitigate those impacts. Where applicable, HCC seeks financial contributions from residential developments towards county council services including; education, early years, youth, childcare, waste and library facilities. Provision of fire hydrants is also now routinely sought through inclusion of relevant planning conditions. In the case of the above proposal for 289 dwellings, financial contributions are sought towards education, early years, waste, library and youth services.
- 1.3 It is considered that the requirements of HCC, as set out in this Statement, do meet the tests of Regulation 122 of the Community Infrastructure Levy (CIL) Regulations 2010 (as amended 2019) and are in accordance with Policy IM2 (Planning Obligations) of the Welwyn Hatfield District Plan (adopted in April 2005) and Policy SP13 (Infrastructure Delivery) of the Welwyn Hatfield Draft Local Plan Proposed Submission document (2016).
- 1.4 HCC's Growth and infrastructure Unit acts on behalf of education, early years, youth, childhood support, library, waste, and fire and rescue services. Highway matters are dealt with separately by Hertfordshire Highways.

2.0 Planning Policy Context

- 2.1 The following policy is relevant:-

Central Government Policy

- 2.2 The Government published a revised National Planning Policy Framework (NPPF) in July 2021. This sets out the Government's planning policies for England and replaces previous versions of the NPPF.
- 2.3 The NPPF sets out, in paragraph 10, a "*presumption in favour of sustainable development*" which is seen as a thread running through both plan-making and decision-taking. The document states, in paragraph 8, that there are three overarching objectives to sustainable development: economic, social and environmental:

“Achieving sustainable development means that the planning system has three overarching objectives, which are interdependent and need to be pursued in mutually supportive ways (so that opportunities can be taken to secure net gains across each of the different objectives):

*a) **an economic objective** – to help build a strong, responsive and competitive economy, by ensuring that sufficient land of the right types is available in the right places and at the right time to support growth, innovation and improved productivity; and by identifying and coordinating the provision of infrastructure;*

*b) **a social objective** – to support strong, vibrant and healthy communities, by ensuring that a sufficient number and range of homes can be provided to meet the needs of present and future generations; and by fostering well-designed, beautiful and safe places, with accessible services and open spaces that reflect current and future needs and support communities’ health, social and cultural well-being; and*

*c) **an environmental objective** – to protect and enhance our natural, built and historic environment; including making effective use of land, improving biodiversity, using natural resources prudently, minimising waste and pollution, and mitigating and adapting to climate change, including moving to a low carbon economy.”*

2.4 The descriptions of the first two objectives, an economic objective and a social objective, emphasise the need for development to be supported by and have access to infrastructure and local services in order to achieve sustainable development.

2.5 The importance of education infrastructure is set out within paragraph 95 of the NPPF. This states that:

“It is important that a sufficient choice of school places is available to meet the needs of existing and new communities. Local planning authorities should take a proactive, positive and collaborative approach to meeting this requirement, and to development that will widen choice in education. They should:

a) give great weight to the need to create, expand or alter schools through the preparation of plans and decisions on applications; and

- b) *work with schools promoters, delivery partners and statutory bodies to identify and resolve key planning issues before applications are submitted.*

2.6 Paragraph 55 of the NPPF set out the position in terms of the use of planning obligations. This states that:

“Local planning authorities should consider whether otherwise unacceptable development could be made acceptable through the use of conditions or planning obligations. Planning obligations should only be used where it is not possible to address unacceptable impacts through a planning condition.”

2.7 However, planning conditions cannot be used in relation to the payment of financial contributions to mitigate the impact of a development (Circular 11/95: Use of conditions in planning permission, paragraph 83). Instead, financial contributions need to be secured through planning obligations.

2.8 Paragraph 57 of the NPPF sets out the tests associated with planning obligations. This states that:

*“Planning obligations must only be sought where they meet all of the following tests:
a) Necessary to make the development acceptable in planning terms;
b) Directly related to the development; and
c) Fairly and reasonably related in scale and kind to the development.”*

2.9 This paragraph reflects Regulation 122(2) of the Community Infrastructure Levy Regulations 2010 which came into force in April 2010 and were subsequently amended in September 2019.

2.10 HCC therefore consider that the provision of necessary infrastructure and community services, as sought for this development, to be an essential part of the Government’s philosophy in relation to the creation of sustainable communities. Furthermore, securing planning obligations, in the form of financial contributions, which meet the statutory CIL tests is a legitimate approach to mitigating the impact this development.

Development Plan Policy

2.11 The need for financial contributions and to secure appropriate provision such as fire hydrants is currently required under *Policy IM2 (Planning Obligations) of the Welwyn Hatfield District Plan* (adopted in April 2005) and *Welwyn Hatfield Borough Council’s Planning Obligations Supplementary Planning Document (SPD)* (adopted February 2012).

In addition, emerging Policy SP13 (Infrastructure Delivery) contained within the Draft Local Plan Proposed Submission Document (2016) also states that ‘*To support the delivery of sustainable communities, the Council will ensure that suitable provision is made for new or improved infrastructure, required to meet the levels of growth identified in this Local Plan.*’

This plan has gone through the hearing sessions stage of examination and the current proposed main modification to the policy to clarify the council’s approach to infrastructure delivery in relation to the adopted Planning Obligations SPD is contained within examination document EX235.

Background to County Council policy

- 2.12 The county council is responsible for ensuring the provision of a range of services. For many years the county council has sought financial contributions and/or facilities from developments towards the provision of services across Hertfordshire, where not covered by a CIL charge. Until summer 2007, saved structure plan policy was used to justify seeking planning obligations, together with local plan policies and other planning policies where appropriate. Given the changes to the planning system at that time, and in an effort to clarify and simplify the county council’s requirements, the county council produced guidance for developers and local planning authorities on the subject of planning obligations which could be used to support and inform existing local development plan policies and to assist in the provision of planning obligations related supplementary planning documents. This guidance was the *Planning Obligations Guidance – Toolkit for Hertfordshire*, published in January 2008 (“the Toolkit”) (**Appendix A**).
- 2.13 The production of the Toolkit reflected the advice which was provided at paragraphs B25-30 of Circular 5/05 “Planning Obligations”, which among other things required all tiers of government with legitimate land-use planning interests to be involved at an appropriate level and in a focused way in providing an evidence base and setting planning obligation policies.
- 2.14 It is important to note that whilst the Toolkit provided education costs, in the form of a planning obligations contributions table (Table 2, on page 18), that these costs were only for school expansions and not for new schools. This is set out in paragraph 12.4 of the Toolkit:

“However, it should be noted that the indicative contributions table is not appropriate for larger developments, for instance, those giving rise to need for a new school.” (paragraph 12.4)

2.15 When considering the cost of new schools, and the level of contributions which should be sought, HCC applied the Department for Education (DfE) scorecard costs. The rationale for this is the DfE guidance (*Securing developer contributions for education*, November 2019, **Appendix B**) which is clear that when calculating the cost of education provision the assumed cost of mainstream school places should be based on the national average costs published in the DfE school place scorecards (paragraph 15 of *Securing developer contributions for education*, November 2019):

“We advise that you base the assumed cost of mainstream school places on national average costs published in the DfE school place scorecards.”

2.16 When the planning application for this development (6/2020/3420/MAJ) was presented to the Welwyn Hatfield Borough Council Development Management Committee on 9 September 2021 it included the following county council requirements, set out in paragraph 9.185 of the Committee report (**Appendix B**):

- Primary Education/Nursery - £872,102 towards the new 3fe Peartree Primary School (index linked to 1Q2020 (BCIS All in TPI))
- Secondary Education – £138,694 towards the expansion of Ridgeway Academy from 7fe to 8fe (index linked to PUBSEC 175)
- Childcare Service - £12,200 towards the new 3fe Peartree Primary School (index linked to PUBSEC 175)
- Library Service – £31,952 towards enhancement and improvement of Welwyn Garden City Library (index linked to PUBSEC 175)
- Youth Service – £3,668 towards increasing the capacity at Welwyn Garden City Young People’s Centre (or its re-provision) (index linked to PUBSEC 175)
- Fire Hydrant provision – although the Local Planning Authority stated that it is considered more appropriate to secure this by condition.

2.17 These requirements had previously been provided by Hertfordshire County Council in February 2021 in response to the planning application consultation (**Appendix C**). In addition a waste service contribution was required for £35,902 towards the development of the Tewin Road Recycling Centre (index linked to 3Q2020 (BCIS All in TPI)).

2.18 Subsequently a revised set of obligations was provided by HCC in relation to a revised development mix provided in August 2021. The amended contributions were set out by HCC and reported verbally at committee as follows (also in **Appendix C**):

- Primary Education/Nursery - £830,574 towards the new 3fe Peartree Primary School (index linked to 1Q2020 (BCIS All in TPI))
- Secondary Education - £140,993 towards the expansion of Ridgeway Academy from 7fe to 8fe (index linked to PUBSEC 175)

- Childcare Service - £12,120 towards the new 3fe Peartree Primary School (index linked to PUBSEC 175)
- Library Service - £32,379 towards increasing the capacity at Welwyn Garden City Library (index linked to PUBSEC 175)
- Youth Service - £3,747 towards increasing the capacity at Welwyn Garden City Young People's Centre (or its re-provision) (index linked to PUBSEC 175)
- Waste Service - £35,902 towards the development of the Tewin Road Recycling Centre (index linked to 3Q2020 (BCIS All in TPI)).

- 2.19 However, since the county council responded to the application and it was determined by Welwyn Hatfield Borough Council Development Management Committee (on 9th September 2021) HCC has now adopted new guidance, known as the *Hertfordshire County Council Guide to Developer Infrastructure Contributions* ("the Guide") (**Appendix D**).
- 2.20 Following changes brought about by the introduction of the Community Infrastructure Level (CIL) Regulations 2010, it was deemed necessary to update the county council's Toolkit. Updated guidance was also required to reflect changes to the county council's service delivery, the increased costs of delivering infrastructure and to provide a multi-service position statement for developers and local planning authority partners.
- 2.21 The Guide was therefore developed to replace the previous Toolkit. Following two periods of public consultation (in July 2019 and February 2021), of which the responses received from the consultations influenced the final form of the document, the Guide was approved by Hertfordshire County Council Cabinet on 12th July 2021 (**Appendix E**). The Guide was subsequently adopted for use on 19th July 2021.
- 2.22 The Guide provides a Hertfordshire overview of obligations which may be sought as part of the planning process followed by a focus on those obligations which might be sought by the county council to mitigate the impact of development. The technical appendices also provide information on the approach and justification for seeking planning obligations from new development on a service-by-service basis. They advise on thresholds, base charges and comment on the potential use of contributions.
- 2.23 The Guide provides updated costs and services for which contributions are now sought. This include additional service requirements, for SEND, not previously sought when the application was originally responded to (on 5 February & 31 August 2021) and was determined at committee. The contributions set out in the Guide reflect the cost of increasing services to mitigate the additional demand from proposed developments.

- 2.24 Although the CIL Regulations discourage the use of formulae to calculate contributions, the county council is not in a position to adopt a CIL charge itself. Accordingly, in areas where a CIL charge has not been introduced by the relevant charging authority, planning obligations remain the only route to addressing the impact of a development where financial contributions or provision (e.g. land) is required. In instances where a development is not large enough to require on-site provision but is large enough to generate an impact on service provision, an evidenced mechanism is needed to form the basis of any planning obligation sought. The methodology for county council services, as set out within the Guide and its technical appendices, are considered to be an appropriate evidenced mechanism.
- 2.25 This Statement therefore sets out the current HCC position in terms of contributions required from the development, which is an updated position to those requirements and levels of contributions provided when the planning application was originally submitted and determined. If the appeal is allowed and planning permission is granted then HCC considers that the county council requirements and levels of financial contributions should be based on the updated and current HCC guidance, as set out in this Statement.

Triggers

- 2.26 HCC has a responsibility to ensure that appropriate mitigation measures are in place prior to the need generated by a development site. With consideration of lead-in times for project delivery, HCC's position is, wherever possible, to seek payment of financial contributions at the earliest possible trigger date and in advance of the need being generated. This also reduces risks of later trigger points which may be significantly delayed or never reached and yet an element of the impact having arisen. The triggers for payment of contributions for the various county council service requirements are included in the relevant sections in this Statement.

Indexation

- 2.27 The county council requires financial contributions to be subject to indexation, to account for inflation and ensure their value is retained. Therefore, indexation will need to be applied to the contributions required from this development. Apart from the county council monitoring fees, and waste contributions which are based on costs as of 3Q2020, the required contributions are based on costs as of 1Q2020 based on the Building Cost Information Service (BCIS) All in TPI indices. The county council monitoring fees are based on costs as of July 2021, based on the Retail Price Index (RPI) indices.
- 2.28 Indexation should be applied from the date at which the costs are set (1Q2020 for non-monitoring fee contributions, 3Q2020 for waste and July 2021 for the county

council monitoring fees) not at the point of determination of the application or signing of the S106 legal agreement. Increases in indexation needs to be applied from the finalised index figure published by the Royal Institution of Chartered Surveyors in its last quarterly publication prior to 1Q2020 (3Q2020 for waste or July 2021 for the county council monitoring fees), to the finalised index figure published by the Royal Institution of Chartered Surveyors in its last quarterly publication published before the date of payment of the contributions.

3.0 Justification

- 3.1 As set out above, it is widely recognised at all levels of policy that some developments may impact on infrastructure and services provided by public bodies and that, where relevant, this impact should be addressed through financial mitigation to offset those impacts. The infrastructure and services affected by the appeal proposal are considered in more detail below. This Statement should be considered in conjunction with the Guide (**Appendix D**) and its relevant technical appendices.
- 3.2 The overriding principle which governs Hertfordshire County Council's approach to seeking S106 financial contributions is that development proposals which generate a net increase to the number of dwellings within any given area would in most cases result in an increase in population, and as such would necessitate the need for additional capacity to be provided for the new residents.
- 3.3 To determine whether or not a financial contribution is required, the county council firstly calculates the number of people arising from the development that will require access to that specific service, and then compares this to the capacity of current provision. This is a well-established process based on robust figures and information.
- 3.4 In order to calculate the likely population to arise from any given development, the county council has developed a census-based model, the Hertfordshire Demographic Model ("the Model"). The Model projects the average number of people, based on the specific service requirement, likely to emerge from different types, sizes and tenures of dwellings over time. A guide to the Hertfordshire Demographic Model, which provides a more detailed explanation as to the inputs and outputs of the Model, is provided in **Appendix F**.
- 3.5 The modelled yields are calibrated against observed yields from recent new developments in Hertfordshire, which have been assessed as part of a recent, detailed, pupil yield study (further information on the *Hertfordshire County Council Pupil Yield Survey* is included in **Appendix G**). This ensures that the Hertfordshire Demographic Model is based on the most up-to-date information. In terms of education requirements, it also means that the Hertfordshire Demographic Model

adheres to paragraph 8 of the Department for Education (DfE) Guidance (*Securing developer contributions for education*, November 2019, **Appendix H**):

“Pupil yield factors should be based on up-to-date evidence from recent local housing developments, so you can forecast the education needs for each phase and type of education provision arising from new development.”

- 3.6 Given that the Hertfordshire Demographic Model is based on the most up-to-date information related to development in Hertfordshire and provides the county council with the necessary baseline evidence in order to support the requests for financial contributions, the county council therefore considers that the Hertfordshire Demographic Model is a reasonable and robust approach to calculating the impact of development. Further justification and evidence on the use of the Hertfordshire Demographic Model is set out in section 1.1 of *A Guide to the Hertfordshire Demographic Model* (**Appendix F**).
- 3.7 It must be noted that calculations within the Model use unrounded data as per analytical best practice. However, for accessibility and demonstrative purposes, pupil count figures referenced in this Statement (for primary education, secondary education and nursery provision) have been rounded to the nearest two decimal places.
- 3.8 As such, the level of contributions, for primary education, secondary education and nursery provision, presented in this Statement may not correspond exactly with the final sum of contributions sought by the Model. On average, there is a +/-0.03% difference between the final contribution sought by the Model and the contribution calculation process demonstrated in the primary education, secondary education and nursery provision sections below. This difference is not statistically significant.
- 3.9 Figures generated by the Model should be taken as the agreed value of contributions sought by the county council, with the tables in the primary education, secondary education and nursery provision sections being for demonstrative purposes only.
- 3.10 The cumulative impact of developments on local service provision is an important consideration. The use of formulae and standard charges is a means of addressing the likely cumulative impact of development in a fair and equitable way. Therefore, where necessary and appropriate, the county council will seek financial contributions to fund both on-site and off-site provision arising from the cumulative impact of development in an area.
- 3.11 The approach set out above clearly demonstrates that the principle and process of seeking financial contributions applied by Hertfordshire County Council is both sound and reasonable. The county council considers that through the use of the Guide and

the Model planning applications are dealt with in an equitable, fair and transparent manner.

3.12 Seeking financial contributions as set out within this Statement also conforms and complies to the three CIL tests (as set out within Regulation 122 of the CIL Regulations 2010 and paragraph 57 of the NPPF):

1. Through the process of analysing the capacity of existing provision in an area the financial contributions are only sought where they are **necessary to make the development acceptable in planning terms** (e.g. where sufficient spare capacity does not exist to mitigate the level of population arising).
2. Contributions are spent on additional capacity and provision in facilities within the area that the development is located in and are therefore **directly related to the development**.
3. Through use of the Model, the level of contributions sought are proportional to the population arising from the development and are therefore **fairly and reasonably related in scale and kind to the development**.

3.13 The populace projections set out within this Statement for each service are based on the mix of units set out in **Table 1** below, which was the updated mix provided in August 2021:

TABLE 1: Development mix for Biopark, Broadwater Road, Welwyn Garden City, AL7 3AX (6/2020/3420/MAJ):

HOUSES		
Number of bedrooms	Market & Shared Ownership	Affordable Rent & Social rent
1		
2		
3		
4+	8	
Total	8	

FLATS		
Number of bedrooms	Market & Shared Ownership	Affordable Rent & Social rent
1	129	
2	126	
3	26	
4+		
Total	281	

4.0 Education Provision – Background Information

4.1 The county council is the Local Authority with the statutory responsibility for the provision of education services. It has a duty to ensure that there are sufficient school places in an area, ensuring that every child has access to a school place and to meet

the needs of the population. This includes; primary education provision, secondary education and sixth-form education provision, and special needs services and facilities.

- 4.2 As the county council has the statutory responsibility to ensure that there are sufficient school places available across the county, it remains the appropriate authority to assess the requirements for school place provision for any new housing developments, be a signatory to any S106 agreement which includes education provision and receive the appropriate financial contributions.
- 4.3 In terms of education contributions, the overriding principle which governs Hertfordshire County Council's approach is that development proposals which generate a net increase to the number of dwellings within any given area would in most cases result in an increase in children, and as such would necessitate the need for school places to be provided for the children requiring them.
- 4.4 In order to determine whether or not education contributions are required, the county council firstly calculates the number of pupils arising from the development and then compares this to the capacity of the planning area in which the development is located. This is a well-established process based on robust figures and information. When calculating the number of pupils and considering the pressure on the schools within the planning area the county council considers the cumulative impact of any developments in the area.
- 4.5 In order to calculate the number of pupils arising from developments, the County Council uses the Hertfordshire Demographic Model. The Model projects the average number of children likely to emerge from different types, sizes and tenures of dwellings over time.
- 4.6 Once the pupil yield has been calculated, current information on the school capacity is then used to determine if there is sufficient space to accommodate the children arising from the development. The school capacity is considered at the point that the development starts to yield children rather than any earlier date in time when dwellings will not have been built or occupied. For primary education provision consideration is given to the school capacity over the next four years, as birth information is not known further into the future.
- 4.7 The capacity of local schools is informed by the county council's pupil forecasts. This forecast model has been developed for and is operated by HCC's Children's Services Department. These pupil forecasts are produced annually using actual up to date data of 0 to 4 years olds living in an area as well historic migration patterns. The forecasts may also take account of an element of known new housing developments which are proposed nearby.

- 4.8 Pupil forecasts are based on pupil planning areas. When considering whether or not there are surplus school places the county council only considers the pupil planning area which the proposed development lies. The reason for this is that if journeys to school exceed the statutory walking distances, or do not have an available route, the county council would be required to provide transport, with additional ongoing revenue costs and sustainability concerns. Not planning on this basis could give rise to issues of accessibility, additional congestion from car trips and road safety (crossing roads and cycling etc).
- 4.9 If there is a lack of capacity at the schools within the pupil planning area to meet the needs arising from the development then the county council will seek a financial contribution from the development in order to provide for the additional places, if a suitable project exists and is deliverable.
- 4.10 When considering the cost of new education provision, and the level of contributions which should be sought, HCC applies the DfE scorecard costs. The rationale for this is the DfE guidance (*Securing developer contributions for education*, November 2019, **Appendix H**) which is clear that when calculating the cost of education provision, including primary education, secondary education, nursery and post-16 costs, the assumed cost of mainstream school places should be based on the national average costs published in the DfE school place scorecards (paragraph 15 of *Securing developer contributions for education*, November 2019):
- “We advise that you base the assumed cost of mainstream school places on national average costs published in the DfE school place scorecards.”*
- 4.11 The current DfE Scorecard costs, for primary and secondary education provision, can be found in **Appendix I**.
- 4.12 New housing tends to attract a greater proportion of young families than older housing, yielding higher pupil numbers particularly in the pre-school and primary age groups. The Model allows the pupil yield projection to change with time, as children grow older and age into different school phases and, in the longer term, the development starts to conform to an age structure in line with mature housing stock in the wider community. The result is often a peak in demand in the medium term as, for example, pre-school children age into the primary phase. The county council seeks contributions which reflect this change over time and recognise that an element of ‘temporary’ provision may be needed to meet peaks in demand.
- 4.13 Permanent per-place costs are sought for places needed for a period of seven years or more at the primary phase and five years or more at the secondary phase. Temporary per-place costs will be sought for places which would be required for less

than seven years at primary, or less than five years at secondary. Seven and five years represent the lifetime of one cohort at the primary and secondary phase respectively and provides a reasonable delineation between the requirement for permanent and temporary provision. Further information on assessing need and calculating education contributions is set out in Section 2 of the technical appendix to the Guide, *Technical appendix 3: Education (Mainstream Schools)* (**Appendix J**).

5.0 Primary Education Provision

- 5.1 Primary education services are assessed on the basis of primary education pupil planning areas (PPA). The development at Biopark, Broadwater Road, Welwyn Garden City, AL7 3AX falls within the pupil planning area 12.3 *Welwyn Garden City West* and 12.4 *Welwyn Garden City East* (**Appendix K**). When planning school places the areas are combined to take account of demand across the whole town. Families living in Welwyn Garden City predominantly look to Welwyn Garden City for primary education provision.
- 5.2 As can be seen in the forecast (**Table 2**), there is currently a close match between primary places available and demand within the Welwyn Garden City West PPA, with only a very small amount of surplus capacity forecast in some years. Forecasts show that there is surplus capacity identified within Welwyn Garden City East PPA with the largest surplus forecasted to be year 2024-25, which then reduces again the following year.

TABLE 2: Pupil Planning Area 12.3 – Welwyn Garden City West & 12.4 Welwyn Garden City East 2021/22 forecast data

12.3 WGC West		Places Available 2021-22	Actuals			Forecast				
School Code	School Name		2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26
2142	Templewood Primary School	30	30	30	29					
2237	Harwood Hill Junior Mixed Infant and Nursery School	30	27	30	30					
2283	Homerswood Primary and Nursery School	30	29	30	30					
2454	Applecroft School	60	61	60	60					
3339	St John's Voluntary Aided Church of England Primary School, Lemsford	15	15	15	15					
Total Year R Pupil Demand			162	165	164	162	145	164	146	152
Total Year R Places Available		165				165	165	165	165	165
Surplus or Shortage of Year R Places (No.)						3	20	1	19	13
Surplus or Shortage of Year R Places (%)						1.8%	12.1%	0.6%	11.5%	7.9%
Surplus or Shortage of Year R Places (FE)						0.1	0.7	0.0	0.6	0.4

12.4 WGC East										
School Code	School Name	Places Available 2021-22	Actuals			Forecast				
			2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26
2027	Swallow Dell Primary School	60	59	59	57					
2081	Springmead Primary School	60	51	48	41					
2140	Peartree Primary School	30	29	28	27					
2143	Holwell Primary School	60	58	59	53					
2240	Creswick Primary and Nursery School	60	61	57	53					
2296	Waterside Academy	30	29	22	22					
2356	Panshanger Primary School	30	30	29	30					
2446	Watchlytes Junior Mixed Infant and Nursery School	30	30	29	29					
2996	Commonswood Primary & Nursery School	60	59	60	59					
3382	Our Lady Roman Catholic Primary School	30	30	28	23					
3404	The Holy Family Catholic Primary School	30	27	27	17					
Total Year R Pupil Demand			463	446	411	441	406	410	360	390
Total Year R Places Available		480				480	480	480	480	480
Surplus or Shortage of Year R Places (No.)						39	74	70	120	90
Surplus or Shortage of Year R Places (%)						8.1%	15.4%	14.6%	25.0%	18.8%
Surplus or Shortage of Year R Places (FE)						1.3	2.5	2.3	4.0	3.0

Source: [School planning | Hertfordshire County Council](#)

- 5.3 The forecast shows surplus capacity of between 0.6% and 12.1% in Welwyn Garden City West PPA and between 8.1% and 25% in Welwyn Garden City East. Fluctuations in demand are expected as the population ebbs and flows, and the county council would always plan for a small level of surplus to allow for both these fluctuations in demand and parental preference. Not all unfilled school places should be considered “surplus”. The National Audit Office recognises that some spare school capacity is necessary to provide some flexibility for parental preference. The 2013 *National Audit Office report Capital Funding for New School Places* confirms that the Department for Education (DfE) considers it “reasonable for authorities to aim for between 5 and 10 per cent primary surplus to allow them some opportunity to respond to parental choice” (para 1.17) and that 5% is “the bare minimum needed for authorities to meet their statutory duty with operational flexibility, while enabling parents to have some choice of schools” (para 1.16).
- 5.4 In total, across both PPAs, 645 reception places are currently provided across the town. Current forecasts indicate some surplus capacity at reception across the town. E.g. of the 645 available reception places 597 places were taken up in 2021-22. However, these forecasts do not take into account the significant level of housing growth proposed for Welwyn Garden City within the WHBC Local Plan beyond immediate new development, which has planning permission granted and is anticipated to be built and occupied within the forecast timeframe.
- 5.5 Significant numbers of new dwellings are proposed in and around Welwyn Garden City and the level of demand arising from them cannot be accommodated within the surplus places currently available in the existing schools and therefore additional capacity is required to ensure every child is able to access a local school place.

- 5.6 The current primary education mitigation strategy for Welwyn Garden City is through a new 2FE (Forms of Entry) primary school at SDS1 (the Panshanger site at North East Welwyn Garden City), a new 2FE primary school at SDS2 (Birchall Garden Suburb), a new 3FE primary school within the East Hertfordshire District Council (EHDC) allocation of Birchall Garden Suburb and the rebuild of Peartree Primary School which will have a further 2FE of new provision. This totals 9FE of new primary education provision for Welwyn Garden City (and includes the mitigation of the Birchall Garden Suburb EHDC allocation). The timing of when the new or additional primary school provision will be brought forwards will be dependent upon the timing of new housing.
- 5.7 Furthermore, the latest GP registration data of the pre-school population, which informs the pupil forecasts, indicates more 0-4 year olds living in the Welwyn Garden City area than reception places available in the town in two of the four forecast years. The main reason that there appears to be sufficient spare capacity in the settlement is due to the current significant migration out of the town to the surrounding villages and Hatfield, with approximately 2FE of children living in the Welwyn Garden City East & Welwyn Garden City West PPAs attending a school in the neighbouring areas of Welwyn, Oaklands and Mardley Heath, Woolmer Green and Hatfield.
- 5.8 With the scale of housing growth proposed in these surrounding areas, local demand is anticipated to increase and, as admissions rules prioritise pupils based on distance, children from further afield will be less likely to gain a place. Therefore, the school places currently available in the surrounding areas cannot be relied upon in the future as the outflow from Welwyn Garden City would be stemmed as those areas fill up with more local pupils.
- 5.9 With the significant outflow in primary pupils no longer occurring any surplus primary capacity in Welwyn Garden City will disappear.
- 5.10 Therefore, based on the evidence provided above, the county council has demonstrated that there will be insufficient capacity within Welwyn Garden City to be able to mitigate the numbers of primary-aged children arising from this development and therefore primary education capacity will be required in the future in order to mitigate the additional demand being created. As such contributions are sought to mitigate this development.
- 5.11 Furthermore, as outlined in paragraph 4.7 above, the primary forecasts are based on actual children and therefore only project four years into the future. Therefore, they only take account of an assumed pupil yield arising from new housing anticipated to be approved and built and occupied within the forecast timeframe. As a result, they do not capture in full the significant scale of proposed or planned housing growth beyond this period or the anticipated pupil demand from it.

- 5.12 As a result of the level of development proposed in the area the primary education project which will mitigate this impact is a new and enlarged replacement (from a 1 Form of Entry to a 3 Form of Entry) Peartree Primary School in Welwyn Garden City developed on its existing site together with adjoining land. The new Peartree Primary School is geographically the closest primary school to this proposed housing development and as such can reasonably be expected to serve the children who would live within this development.
- 5.13 This mitigation project was reflected in the county council's response to this planning application (on 5 February and 31 August 2021, **Appendix C**) in which HCC noted that primary education mitigated of this development would be through a new 3FE Peartree Primary School in Welwyn Garden City.
- 5.14 Therefore, proportional financial contributions towards primary education mitigation are sought, from new residential developments in the area, including this site, towards a new 3FE Peartree Primary School in Welwyn Garden City.
- 5.15 For mainstream primary education provision, based on the development mix in paragraph 3.13 above, the Model has projected that this development will generate a peak of 38.35 primary-aged children, resulting in a peak of 0.18 forms of entry (FE).
- 5.16 Based on the DfE scorecard costs (**Appendix I**), the permanent cost per place for a new primary school is £20,508 of which 33.01 places are charged at this rate. Based on the DfE scorecard costs, the temporary rate is £8,196 of which 5.34 places are charged at this rate. Note that as set out in paragraphs 3.7 – 3.9, for accessibility and demonstrative purposes, the number of children has been rounded to the nearest two decimal places whilst the Model uses unrounded data.
- 5.17 For compulsory primary education provision a financial contribution of £720,736 would be sought. **Table 3** provides an indication of how this contribution has been calculated. The minimal difference in the contribution set out in **Table 3** is that the Model uses unrounded data whilst, for accessibility and demonstrative purposes, the number of children in the table has been rounded to the nearest two decimal places, see paragraphs 3.7 – 3.9. To confirm the contribution of £720,736 is sought by the county council.

Table 3: Permanent and temporary charging rate and number of places charged for mainstream Primary education contributions (excluding nursery contributions):

	Number of Places	Charge Rate	Contributions Sought
	33.01	£ 20,508	£676,969
	5.34	£ 8,196	£43,767
Total	38.35		£720,736

- 5.18 The primary education project (a new 3FE Peartree Primary School in Welwyn Garden City) will also include nursery provision within it, and therefore nursery contributions need to be included. For nursery provision, based on the development mix in paragraph 3.13 above, the Model has projected that this development is likely to generate 6.30 children. Note that as set out in paragraphs 3.7 – 3.9, for accessibility and demonstrative purposes, the number of children has been rounded to the nearest two decimal places whilst the Model uses unrounded data.
- 5.19 Based on the DfE scorecard costs (**Appendix I**) of £20,508 per permanent place and £8,196 per temporary place, the county council would seek £118,365 in nursery contributions. **Table 4** provides an indication of how this contribution has been calculated. The minimal difference in the contribution set out in **Table 4** is that the Model uses unrounded data whilst, for accessibility and demonstrative purposes, the number of children in the table has been rounded to the nearest two decimal places, see paragraphs 3.7 – 3.9. To confirm the contribution of £118,365 is sought by the county council.

Table 4: Permanent and temporary charging rate and number of places charged for nursery contributions:

	Number of Places	Charge Rate	Contributions Sought
	5.42	£ 20,508	£111,153
	0.88	£ 8,196	£7,212
Total	6.30		£118,365

- 5.20 The mainstream primary education and nursery provision contributions together total **£839,102** (£720,736 + £118,365) (index linked to 1Q2020 – BCIS All in TPI), to be used **towards a new 3FE primary school in Welwyn Garden City.**
- 5.21 The funding of this project will be through financial contributions secured from developments in the area, including this site, with any shortfall being met through alternative funding sources. The project will therefore be able to be delivered.
- 5.22 As set out in paragraph 2.26, the county council has a responsibility to ensure that appropriate mitigation measures are in place prior to the need generated by a

development site with consideration of lead-in times for project deliver. On this basis, the county council therefore considers that the following triggers for payment of the primary education contributions arising from this development are reasonable and justifiable:

- 50% of the primary education contribution prior to commencement of development
- 50% of the primary education contribution prior to occupation of 145 dwellings

5.23 Primary education contributions, towards this project, were requested in the original response to the planning application (**Appendix C**). Further information on the assessment of primary education contributions is available in the technical appendix to the Guide, *Technical appendix 3: Education (Mainstream Schools)* (**Appendix J**).

6.0 Secondary Education Provision

6.1 Secondary education services are assessed on the basis of secondary education pupil planning areas. The development at Biopark, Broadwater Road, Welwyn Garden City, AL7 3AX falls within the pupil planning area *12.0 Welwyn Garden City* (**Appendix L**), with families living in Welwyn Garden City predominantly look to Welwyn Garden City for secondary education provision.

6.2 As can be seen in the forecast (**Table 5**), there is currently a close match between secondary places available and demand within the Welwyn Garden City secondary planning area, with only a small amount of surplus capacity forecast in some years and one year forecasting a deficit.

TABLE 5: Pupil Planning Area 12.0 – Welwyn Garden City 2021/22 forecast data

12.0 Welwyn Garden City															
School Code	School Name	Places Available 2021-22	Actuals			Forecast									
			2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31
4014	Spanborough School	240	206	210	163										
4031	Ridgeway Academy	180	141	186	180										
4118	Monk's Walk School	236	225	228	224										
Total Year 7 Pupil Demand			572	624	567	607	612	636	608	634	654	622	671	630	642
Total Year 7 Places Available		656				656									
Surplus or Shortage of Year 7 Places (No.)						49	44	20	48	22	2	34	-15	26	14
Surplus or Shortage of Year 7 Places (%)						7.5%	6.7%	3.0%	7.3%	3.4%	0.3%	5.2%	-2.3%	4.0%	2.1%
Surplus or Shortage of Year 7 Places (FE)						1.6	1.5	0.7	1.6	0.7	0.1	1.1	-0.5	0.9	0.5

Source: [School planning | Hertfordshire County Council](#)

- 6.3 Given the significant levels of new housing growth proposed in and around Welwyn Garden City, of which not all of this development is factored into the forecast, it is anticipated that additional secondary education capacity will therefore be required in the future in order to mitigate the additional demand being created.
- 6.4 There are three secondary schools in Welwyn Garden City offering a total of 656 Year 7 places between them. The latest summer 2021 secondary forecast indicates a surplus of places in some years of the forecast, with a close match between demand and capacity in the later years of the forecast, with a deficit anticipated in 2028-29. As a result of the level of development proposed in the area secondary contributions are sought towards the expansion of Ridgeway Academy by 1 Form of Entry.
- 6.5 This mitigation project was reflected in the county council's response to this planning application (on 5 February and 31 August 2021, **Appendix C**) in which HCC noted that secondary education mitigated of this development would be through an expansion of Ridgeway Academy by 1 Form of Entry in Welwyn Garden City.
- 6.6 Therefore, proportional financial contributions towards secondary education mitigation are sought, from new residential developments in the area, including this site, towards a 1FE expansion of Ridgeway Academy.
- 6.7 For mainstream secondary education provision, based on the development mix in paragraph 3.13 above, the Model has projected that this development will generate a peak of 26.81 secondary-aged children, resulting in a peak of 0.18 forms of entry (FE).
- 6.8 Based on the DfE scorecard costs (**Appendix I**), the permanent cost per place for a permanent expansion of a secondary school is £23,775 of which 24.48 places are charged at this rate. Based on the DfE scorecard costs, the temporary rate is £9,248 of which 2.33 places are charged at this rate. Note that as set out in paragraphs 3.7 – 3.9, for accessibility and demonstrative purposes, the number of children has been rounded to the nearest two decimal places whilst the Model uses unrounded data.
- 6.9 For compulsory secondary education provision a financial contribution of £603,560 would be sought. **Table 6** provides an indication of how this contribution has been calculated. The minimal difference in the contribution set out in **Table 6** is that the Model uses unrounded data whilst, for accessibility and demonstrative purposes, the number of children in the table has been rounded to the nearest two decimal places, see paragraphs 3.7 – 3.9. To confirm the contribution of £603,560 is sought by the county council.

Table 6: Permanent and temporary charging rate and number of places charged for mainstream Secondary education contributions (excluding Post-16 contributions):

	Number of Places	Charge Rate	Contributions Sought
	24.48	£ 23,775	£582,012
	2.33	£ 9,248	£21,548
Total	26.81		£603,560

- 6.10 For Post-16 provision, based on the development mix in paragraph 3.13 above, the Model has projected that this development is likely to generate 6.72 children. Note that as set out in paragraphs 3.7 – 3.9, for accessibility and demonstrative purposes, the number of children has been rounded to the nearest two decimal places whilst the Model uses unrounded data.
- 6.11 In paragraph 16, the DfE guidance (*Securing developer contributions for education*, November 2019, **Appendix H**) is clear that “further education places provided within secondary school sixth forms will cost broadly the same as a secondary school place”. Therefore, based on the DfE scorecard costs (**Appendix I**) of £23,775 per permanent place and £9,248 per temporary place, the county council would seek £151,342 in post-16 contributions. **Table 7** provides an indication of how this contribution has been calculated. The minimal difference in the contribution set out in **Table 7** is that the Model uses unrounded data whilst, for accessibility and demonstrative purposes, the number of children in the table has been rounded to the nearest two decimal places, see paragraphs 3.7 – 3.9. To confirm the contribution of £151,342 is sought by the county council.

Table 7: Permanent and temporary charging rate and number of places charged for Post-16 contributions:

	Number of Places	Charge Rate	Contributions Sought
	6.14	£ 23,775	£145,978
	0.58	£ 9,248	£5,364
Total	6.72		£151,342

- 6.12 The mainstream secondary education and Post-16 provision contributions total **£754,825** (£603,560+ £151,342) (index linked to 1Q2020 BCIS All in TPI), to be used **towards a 1FE expansion of Ridgeway Academy in Welwyn Garden City.**

- 6.13 The funding of this project will be through financial contributions secured from developments in the area, including this site, with any shortfall being met through alternative funding sources. The project will therefore be able to be delivered.
- 6.14 As set out in paragraph 2.26, the county council has a responsibility to ensure that appropriate mitigation measures are in place prior to the need generated by a development site with consideration of lead-in times for project deliver. On this basis, the county council therefore considers that the following triggers for payment of the secondary education contributions arising from this development are reasonable and justifiable:
- 50% of the secondary education contribution prior to commencement of development
 - 50% of the secondary education contribution prior to occupation of 145 dwellings
- 6.15 Secondary education contributions, towards this project, were requested in the original response to the planning application (**Appendix C**). Further information on the assessment of secondary education contributions is available in the technical appendix to the Guide, *Technical appendix 3: Education (Mainstream Schools)* (**Appendix J**).

7.0 Special Educational Needs and Disabilities Provision

- 7.1 The county council has a duty to promote high standards of education, fair access to education and a general duty to secure the sufficiency of school places. It must consider the need to secure provision for children with Special Educational Needs and Disabilities (SEND), including the duty to respond to parents' representations about school provision.
- 7.2 Children in Hertfordshire with SEND have their needs met within a range of inclusive provision. The majority of children will be accommodated within mainstream schools with additional support. However, some children will need intensive support in a smaller environment and will be supported at specialist provision including specialist resource provision and SEN units or bases in mainstream schools. Others will need a special school place.
- 7.3 Hertfordshire has developed a short-term forecasting methodology for special schools based on historical analysis of placements and demand. Where it can be demonstrated that existing capacity is unable to mitigate the impact of development, the county council will seek to secure obligations to create additional provision, whether through the expansion of existing or the creation of new provision.

- 7.4 All Hertfordshire special schools are at capacity and demand for places continues to rise. Due to the level of proposed growth in the county, the demand for special school places is forecast to rise by 364 places between January 2020 and January 2025. It is clear that in order to accommodate additional development in the county new capacity must be built into the system, particularly in some sectors, to ensure that Hertfordshire can continue to meet need locally now and into the future.
- 7.5 The county council has developed a strategy, the *SEND Special School Place Planning Strategy 2020-2023* (Autumn 2020) (**Appendix M**), to ensure that there is sufficient capacity for children with special educational needs and disabilities, and that they have access to high quality local provision that meets their needs.
- 7.6 One of the identified priorities of the Strategy is to build capacity in the Severe Learning Difficulty (SLD) school and Profound Neurological Impairment (PNI) sectors by creating up to 300 new SLD places to meet demand now and into the future. The forecast shows that 75% of the overall increase in demand across the life of the forecast is for SLD and PNI places.
- 7.7 HCC is currently developing proposals to provide 113 new places for children with severe learning difficulties (SLD) in the west of the county and another 100 SLD places in the east of the county. The earliest these places will be delivered is January 2024 for the places in the west and September 2024 for the places in the east.
- 7.8 Those SEND pupils, aged from 2 years to 19 years, arising from this development will be mitigated by the proposed new Severe Learning Difficulty (SLD) special school in the west of the county.
- 7.9 In paragraphs 10 – 13 of the DfE guidance (*Securing Developer Contributions for Education*, April 2019, **Appendix H**) it states that it is reasonable and fair to seek developer contributions for SEND provision in direct proportion to the needs arising from a housing development related to pupils requiring provision in a special school, a specialist provision in a mainstream school, an ESC or other alternative provision.
- 7.10 HCC calculates contributions for SEND provision using flat rate sector values by dwelling type multiplied by the number of dwelling proposed within a development. For SEND primary provision this is £565 per house and £168 per flat. For SEND secondary provision this is £653 per dwelling and £58 per flat.
- 7.11 Therefore, based on the development mix set out at paragraph 3.13 above the total contributions sought for SEND provision are **£73,250**. The details for how this has been calculated are set out in **Table 8** and **Table 9**.

Table 8: Charging rate and number of dwellings charged for SEND Contributions (primary):

SEND Primary			
	Cost Per Dwelling	No. Dwellings	Contributions Sought
Houses	£ 565	8	£4,520
Flats	£ 168	281	£47,208
		Total	£51,728

Table 9: Charging rate and number of dwellings charged for SEND Contributions (secondary):

SEND Secondary			
	Cost Per Dwelling	No. Dwellings	Contributions Sought
Houses	£ 653	8	£5,224
Flats	£ 58	281	£16,298
		Total	£21,522

- 7.12 The total SEND contribution of **£73,250** (index linked to 1Q2020 – BCIS All in TPI) is to be used towards the delivery of a **new Severe Learning Difficulty special school in the west of the county**, for pupils aged from 2 years to 19 years.
- 7.13 The funding of this project will be through financial contributions secured from developments in the area, including this site, with any shortfall being met through alternative funding sources. The project is therefore deliverable.
- 7.14 As set out in paragraph 2.26, the county council has a responsibility to ensure that appropriate mitigation measures are in place prior to the need generated by a development site with consideration of lead-in times for project deliver. On this basis, the County Council therefore considers that the following triggers for payment of the SEND contributions arising from this development are reasonable and justifiable:
- 100% of the SEND contribution prior to commencement of development
- 7.15 SEND contributions are a new requirement arising from the Guide and therefore were not requested in the original response to the planning application (**Appendix C**). Further information on the assessment of SEND contributions is available in the technical appendix to the Guide, *Technical Appendix 4: Education (Special Schools and Specialist Provision)* (**Appendix N**).

8.0 Nursery Provision

- 8.1 The county council currently has a number of statutory duties it has to meet regarding nursery provision, including; free early education for eligible 2 year olds, free early education for 3 and 4 year olds, and thirty hours free childcare for 3 and 4 year olds. This can be provided through; nursery classes in mainstream schools, maintained nursery schools, preschool/playgroups, and day nurseries.
- 8.2 Annually Hertfordshire County Council publishes a Childcare Sufficiency Report which details where places are required across the county. This shows whether there is a lack of sufficient capacity and therefore whether contributions need to be sought.
- 8.3 This area of Welwyn Garden City has a small surplus of places for free early education places in the Summer 2022, however with insufficient capacity to meet the need generated by this development site. The pressure for local places will increase if this development site were to come forward.
- 8.4 The Nursery Education contribution, which is included in the primary school costs, is to be used towards a project to provide additional nursery places, achieved through the provision at the new 3FE Peartree Primary School. The funding of this project will be through financial contributions secured from developments in the area, including this site, with any shortfall being met through alternative funding sources. The project is therefore deliverable.
- 8.5 Planning obligations towards nursery provision are assessed using the Hertfordshire County Council Demographic Model which forecasts the number of nursery-aged children likely to emerge from different types, sizes and tenures of dwellings. For nursery provision, based on the development mix in paragraph 3.13 above, the Model has projected that this development is likely to generate 6.30 children. Note that as set out in paragraphs 3.7 – 3.9, for accessibility and demonstrative purposes, the number of children has been rounded to the nearest two decimal places whilst the Model uses unrounded data.
- 8.6 In paragraph 16, the DfE guidance (*Securing developer contributions for education*, November 2019, **Appendix H**) is clear that “*the per pupil cost of early years provision is assumed to be the same as for a primary school*”. Therefore, the county council will seek nursery contributions commensurate with the cost of primary school provision, as shown in the DfE Scorecard (**Appendix I**).
- 8.7 Based on the DfE scorecard costs of £20,508 per permanent place and £8,196 per temporary place, the county council would seek £118,365 in nursery contributions. **Table 10** provides an indication of how this contribution has been calculated. The minimal difference in the contribution set out in **Table 10** is that the Model uses

unrounded data whilst, for accessibility and demonstrative purposes, the number of children in the table has been rounded to the nearest two decimal places, see paragraphs 3.7 – 3.9. To confirm the contribution of £118,365 is sought by the county council.

Table 10: Permanent and temporary charging rate and number of places charged for nursery contributions:

	Number of Places	Charge Rate	Contributions Sought
	5.42	£ 20,508	£111,153
	0.88	£ 8,196	£7,212
Total	6.30		£118,365

8.8 As the nursery project is part of a new primary school the nursery contribution has been included as part of the total primary education contribution (see Section 5 of this Statement).

8.9 The funding of the nursery project will be through financial contributions secured from developments in the area, including this site, with any shortfall being met through alternative funding sources. The project will therefore be able to be delivered.

8.10 As set out in paragraph 2.26, the county council has a responsibility to ensure that appropriate mitigation measures are in place prior to the need generated by a development site with consideration of lead-in times for project deliver. On this basis, the County Council therefore considers that the following triggers for payment of the nursery contributions arising from this development are reasonable and justifiable:

- 100% of the nursery contribution prior to commencement of development

8.11 Nursery contributions, towards this project, were requested in the original response to the planning application (**Appendix C**). Further information on the assessment of nursery contributions is available in the technical appendix to the Guide, *Technical Appendix 2: Education (Early Years)* (**Appendix O**) and technical appendix to the Guide, *Technical appendix 3: Education (Mainstream Schools)* (**Appendix J**).

9.0 Childcare Provision

9.1 In addition to nursery provision the county council has a statutory duty to ensure there is sufficient childcare for working parents, which covers 0 to 14 year olds (19 years for children with SEND). Childcare can take place in preschools; day nurseries; childminders; and out of school provision, such as holiday clubs and after school

clubs, depending on the age of the child. Note that childcare for 3 to 4 year olds is provided for as part of the nursery contribution.

- 9.2 Annually Hertfordshire County Council publishes a Childcare Sufficiency Report which details where places are required across the county. This shows whether there is a lack of sufficient capacity and therefore whether contributions need to be sought.
- 9.3 This area of Welwyn Garden City has a small surplus of 30 hour free childcare places by summer of 2022. The demand for this new extended childcare entitlement will be high and additional childcare provision will be required, the pressure for local places will increase if this development site were to come forward.
- 9.4 The area has limited before and after school provision for working families with only one out of school club and one breakfast club and this demand for this type of childcare will increase if more housing is developed locally.
- 9.5 Therefore, a contribution is sought for Childcare to be used towards a project to provide additional childcare places at the proposed new 3FE Peartree Primary School in Welwyn Garden City.
- 9.6 Planning obligations towards childcare provision are assessed using the Hertfordshire County Council Demographic Model which forecasts the number of children of childcare age (excluding 3 and 4 year olds) likely to emerge from different types, sizes and tenures of dwellings. For childcare provision, based on the development mix in paragraph 3.13 above, the Model has projected that this development is likely to generate 32 children of childcare age (excluding 3 and 4 year olds).
- 9.7 The financial contribution towards childcare mitigation through increasing capacity is based on £9,625 per place for children aged under 2 and £6,875 per place for those children aged 2. For this development the contribution would therefore be £231,542 for children aged 0 to 2 (£9,625 x 24 children aged 0 to 2) plus £54,283 for children aged 2 (£6,875 x 8 children aged 2). So, a total childcare contribution of £285,825 (£231,542 + £54,283). Note that as set out in paragraphs 3.7 – 3.9, for accessibility and demonstrative purposes, the number of children has been rounded whilst the Model uses unrounded data, which accommodates for a slight difference in the calculation here and the Model figure (which is quoted as more reliable).
- 9.8 The financial contribution of **£285,825** (index linked to 1Q2020 – BCIS All in TPI) is required towards **increasing capacity of the new 3FE Peartree Primary School**. This project is required in order to accommodate the additional residents arising from new developments in the area, including this site.

- 9.9 The funding of the childcare project will be through financial contributions secured from developments in the area, including this site, with any shortfall being met through alternative funding sources. The project will therefore be able to be delivered.
- 9.10 As set out in paragraph 2.26, the county council has a responsibility to ensure that appropriate mitigation measures are in place prior to the need generated by a development site with consideration of lead-in times for project deliver. On this basis, the County Council therefore considers that the following triggers for payment of the childcare contributions arising from this development are reasonable and justifiable:
- 100% of the childcare contribution prior to commencement of development
- 9.11 Childcare contributions, towards this project, were requested in the original response to the planning application (**Appendix C**).

10.0 Youth Provision

- 10.1 Hertfordshire County Council Services for Young People (HCC SfYP) is guided by the Education and Inspections Act 2006. In order to clarify the Government's expectations of Local Authorities (LAs) the Department of Education published the *Statutory Guidance on Services and Activities to Improve Young People's Well-Being* (June 2012). The guidance states LAs should provide:

“young people with the positive, preventative and early help they need to improve their well-being”; that “Youth work and youth workers can contribute to meeting the needs of the young people and reduce demand for more specialist services”; and highlights the importance of personal and social development which enables young people to “build the capabilities they need for learning, work and the transition to adulthood.”

- 10.2 HCC SfYP provides youth work projects and programmes, information, advice, guidance, work-related learning, outdoor education and one-to-one support for young people up to the age of 19 and up to 25 for identified vulnerable young adults including those with learning disabilities.
- 10.3 HCC SfYP youth work is delivered through planned curriculum programmes which are based on identified need resulting in recordable personal and social development outcomes. HCC SfYP supports young people by providing informal education opportunities to promote young people's personal and social development enabling them to make informed decisions, have a place in their community and ultimately reach their potential and make a successful transition to adulthood. This enables young people to:

- Make good decisions based on the information which is available to them.
- Be confident that they can present their views including those of others and influence decisions.
- Recognise when they need support and where they can go to access it, thereby building resilience.
- Be able to recognise and develop healthy relationships.
- Develop a sense of purpose, self-belief and recognise what they contribute to society.

- 10.4 Growth in the number of young people aged 11 to 19 years (the core age group) in a community will require increased resources, providing additional capacity and enabling equal access to those activities. This could take the form of new equipment and/or learning materials and/or improvements to the property to accommodate more young people and/or offer a wider range of activities.
- 10.5 Planning obligations towards youth services are assessed using the Hertfordshire Demographic Model which forecasts the number of young people requiring access to youth services likely to emerge from different types, sizes and tenures of dwellings.
- 10.6 Based on the illustrative mix set out at paragraph 3.13 above the Model estimates that 21 additional young people are likely to reside in this development requiring youth service provision.
- 10.7 In the consultation response to this application (**Appendix C**) HCC stated that contributions from this proposal would be used at the Welwyn Garden City Young People's Centre, or its re-provision. Welwyn Garden City Young People's Centre is a busy and vibrant centre which is already used by significant numbers of young people in the area. The additional young people arising from this development, and others in the area, would result in the facility being over capacity. Contributions are therefore justified in order to fund additional provision.
- 10.8 An important aspect of the Welwyn Garden City Young People's Centre is that it provides an Access Point Project for young people to receive Information, advice and guidance on a range of issues impacting on young people's lives, including Careers Guidance, Homelessness, Substance misuse and Specialist Sexual Health Services. In addition, a range of young people's projects take place from this centre. The additional funding will be used to reconfigure the current rooms and space available to increase delivery capacity and enable more young people to access the services, projects and support.
- 10.9 Therefore, financial contributions from this proposal, and others in the area, would be used towards increasing capacity at Welwyn Garden City Young People's Centre, which will allow a greater number of young people access to this important facility. The

mitigation project of Welwyn Garden City Young People's Centre (or its future re-provision) is the same project as set out within the county council's response to the planning application (**Appendix C**).

- 10.10 As set out in the Guide, the financial contribution towards the mitigation of youth services is based on the need to increase capacity (on the basis of £586 per person) multiplied by the number of additional young people (21 additional young people arising from this development, as calculated by the Model). This is a total contribution of **£12,306** (£586 x 21).
- 10.11 The financial contribution of **£12,306** (index linked to 1Q2020 – BCIS All in TPI) is required towards **increasing capacity of the Welwyn Garden City Young People's Centre (or its future re-provision)**. This project is required in order to accommodate the additional residents arising from new developments in the area, including this site.
- 10.12 The funding of this project will be through financial contributions secured from developments in the area, including this site, with any shortfall being met through alternative funding sources. The project will therefore be able to be delivered.
- 10.13 As set out in paragraph 2.26, the county council has a responsibility to ensure that appropriate mitigation measures are in place prior to the need generated by a development site with consideration of lead-in times for project deliver. On this basis, the county council therefore considers that the following triggers for payment of the youth contributions arising from this development are reasonable and justifiable:
- 100% of the youth contribution prior to commencement of development
- 10.14 Youth contributions, towards this project, were requested in the original response to the planning application (**Appendix C**). Further information on the assessment of youth service contributions is available in the technical appendix to the Guide, *Technical Appendix 5: Youth Connections (Appendix P)*.

11.0 Library Provision

- 11.1 As the Local Libraries Authority, and under the 1964 Public Libraries and Museums Act, the county council has a duty to provide a comprehensive and efficient library service for everyone who lives, works or studies in the County. Hertfordshire County Council is committed to maintaining and modernising its libraries to continue to meet the changing needs of service users and to cope with additional demand brought about by new development.
- 11.2 Libraries are no longer a place solely to borrow books. They function as a community hub offering services and facilities to cater for a range of community needs including

those of children, students, job seekers, and the elderly. Libraries offer free, authoritative, non-judgemental information services and supported access to online resources and services. They provide access to books, audio material, magazines, newspapers and community language material in both physical and digital formats, public computers, Wi-Fi and the internet, online services, ICT-based and other learning opportunities. They also offer neutral places to promote community wellbeing.

- 11.3 Any increase in population puts additional demand on the stock of the library service, whether this is physical stock or “virtual stock” in the case of electronic resources.
- 11.4 Planning obligations towards library services are assessed using the Hertfordshire Demographic Model which forecasts the number of people able to access library services likely to emerge from different types, sizes and tenures of dwellings. Based on the illustrative mix set out at paragraph 3.13 above the Model estimates that 504 additional people arising from this development are expected to require library provision.
- 11.5 Welwyn Garden City library is the local library facility which serves this development. Welwyn Garden City Library is a busy large Tier 1 library. In 2021/22 there were a total of 72,151 in person visits to the library making it one of the top five busiest libraries in the county. All areas of stock are already intensively used and under pressure. This is demonstrated by the latest set of Stock Performance Indicators. In 2020/21 the total number of issues at Welwyn Garden City Library were 115,742 which was much higher than the average of 94,697. The fact that all areas of stock are currently under pressure is also reflected in the turnover figures. In 2020/21 the turnover for all areas of lending stock was 2.25, higher than the average of 1.91. The fact that more public floorspace is required at Welwyn Garden City to increase and expand the range of stock available to the local community is also evidenced by the fact that the total stock figure for the library, which was 51,376 in 2020/21, is much higher than the average of 49,495.
- 11.6 A financial contribution is therefore required in order to mitigate the additional cumulative demand on library services through the new development in the area. Any funding from this proposal would be used to increase the capacity of the library by reconfiguring the space on the ground floor with the installation of a smaller enquiry desk. This will enable the library to increase the adult lending stock and promote it more effectively. It will also enable the library to facilitate and support activities and events such as social inclusion groups etc. The mitigation project to increase the capacity of Welwyn Garden City Library is the same project as set out within the county council’s response to the planning application (**Appendix C**).
- 11.7 As set out in the Guide, the financial contribution towards the mitigation of library services is based on the need to increase resources (on the basis of £38.85 per

person) multiplied by the number of additional people (504 additional people arising from this development, as calculated by the Model). This is a total contribution of **£19,580** (£38.85 x 504).

- 11.8 The financial contribution of **£19,580** (index linked to 1Q2020 – BCIS All in TPI) is required towards **increasing capacity of Welwyn Garden City Library (or its future re-provision)**. This project is required in order to accommodate the additional residents arising from new developments in the area, including this site.
- 11.9 The funding of the project will be through financial contributions secured from developments in the area, including this site, with any shortfall being met through alternative funding sources. The project will therefore be able to be delivered.
- 11.10 As set out in paragraph 2.26, the county council has a responsibility to ensure that appropriate mitigation measures are in place prior to the need generated by a development site with consideration of lead-in times for project deliver. On this basis, the county council therefore considers that the following triggers for payment of the library contributions arising from this development are reasonable and justifiable:
- 100% of the library contribution prior to commencement of development
- 11.11 Library contributions, towards this project, were requested in the original response to the planning application (**Appendix C**). Further information on the assessment of library contributions is available in the technical appendix to the Guide, *Technical Appendix 6: Libraries (Appendix Q)*.

12.0 Waste Provision

- 12.1 Under the Environmental Protection Act 1990, the county council is required to perform the statutory functions of the Waste Disposal Authority (WDA) for Hertfordshire. The WDA is also required to provide facilities in its area where residents may deposit their own household waste free of charge. In Hertfordshire, these facilities are known as recycling centres.
- 12.2 As WDA, Hertfordshire County Council is responsible for the disposal of Local Authority Collected Waste (LACW) arising in the county. LACW consists of household waste and commercial waste collected by the ten Borough and District Councils in their role as the Waste Collection Authorities (WCA's) for Hertfordshire and waste collected at the county's recycling centres.
- 12.3 Hertfordshire County Council currently manages a network of 17 recycling centres. At these locations residents can deposit a number of waste items and materials including those not collected at the kerbside by District and Borough Councils in their role as the

WCA. An increase in population within Hertfordshire as a result of new residential development will require increased capacity and therefore investment in the network. Several recycling centres within the network are identified as unsuitable and therefore are in need of expansion or relocation.

- 12.4 Any additional users resulting from new development will increase the pressure on facilities within the county, thereby limiting service provision. Not all recycling centre locations are close to, at or over capacity so calculations will be considered based on the most up to date evidence available from the Waste Disposal Authority.
- 12.5 The impact of additional dwellings on waste management infrastructure will vary depending on the size of the development and its location. Therefore, it may be necessary to develop new infrastructure or improve existing infrastructure. For example, should an existing centre be identified as having insufficient capacity to accommodate increased usage due to additional dwellings, financial contributions will be identified towards increasing the capacity of the local service provision. This may be achieved through improvements to existing facilities or the development of a new recycling centre.
- 12.6 Given that the geographical catchments for the Hertfordshire recycling centres vary, there will be a different project cost for each facility and project. Costs per project will be calculated based on the individual catchment areas. The cost of the project will be divided by the projected total number of residents in the catchment area in order to get a cost per person rate for the project. This will then be multiplied against the number of new residents arising from the individual development based on Office for National Statistics (ONS) data.
- 12.7 This development is within the catchment area of Tewin Road Recycling Centre, Welwyn Garden City. Recycling Centres play a significant role within the local community. Recycling centres provide local residents with an opportunity to recycle an extensive range of materials and to manage items that are not collected or are costly to collect from the kerbside. The introduction of reuse centres located at many recycling centres also provides an excellent opportunity for good quality items, that would have otherwise been thrown away, to be reused. Tewin Road Recycling Centre does not have sufficient capacity to accommodate the additional, cumulative, growth proposed for the area, which includes this development. Therefore, a contribution is required in order to provide additional provision.
- 12.8 The cost per person rate arising from this project is £51.55 per person. Based on ONS data, of 2.41 persons per dwelling, this development of 289 units is likely to generate 696.49 new residents (289 units x 2.41 persons per dwelling). Therefore, the waste management contribution arising from this development is £35,904 (696.49 x £51.55 per person).

- 12.9 The financial contribution of **£35,904** (index linked to 3Q2020 – BCIS All in TPI) is required towards **increasing capacity of Tewin Road Recycling Centre**. This project is required in order to accommodate the additional residents arising from new developments in the area, including this site.
- 12.10 The funding of the project will be through financial contributions secured from developments in the area, including this site, with any shortfall being met through alternative funding sources. The project will therefore be able to be delivered.
- 12.11 As set out in paragraph 2.26 the county council has a responsibility to ensure that appropriate mitigation measures are in place prior to the need generated by a development site with consideration of lead-in times for project deliver. On this basis, the county council therefore considers that the following triggers for payment of the waste contributions arising from this development are reasonable and justifiable:
- 100% of the waste contribution prior to commencement of development
- 12.12 Waste contributions, towards this project, were requested in the original response to the planning application (**Appendix C**).

13.0 Monitoring Fees

- 13.1 Once the S106 legal agreement is signed, and the development starts to build, the county council incurs costs associated with managing and monitoring the agreement. The county council considers that it should reasonably be able to recover a degree of the costs incurred as part of this process.
- 13.2 It is the aim of the county council to provide as transparent, efficient and cost-effective service as possible within the resources available. Costs may include:
- The maintenance and development of its planning obligations monitoring system (via an integrated database), to help co-ordinate obligation preparation, completion, monitoring and review;
 - Monitoring of trigger points and development progress;
 - Pre-emptive alerts for obligations that are or are to become overdue;
 - Recovery of obligation payments not made, including any necessary formal or legal action;
 - Liaison between the county council and district/borough councils, where infrastructure and facilities are provided by one level of authority but the financial contribution is held by the other;
 - Providing reports on the operation and outcome of county council developer contributions.

- 13.3 A charge for undertaking this work would be made based on the number of triggers within each legal agreement. Each distinct trigger point will attract a charge of **£340**. For example:
- a) a total of four obligations all due on commencement of development would require a total monitoring fee of £340 as the work associated with monitoring that trigger can be combined into one process;
 - b) a total of four obligations due at different stages of development (e.g. prior to commencement of development, on occupation of the 50th dwelling, on occupation of the 100th dwelling and on occupation of the 150th dwelling) would require a total monitoring fee of £1,360 (4 x £340) as the work associated with monitoring each different trigger will be replicated four times in the process
- 13.4 The figure of £340 per distinct trigger point is based on 8 hours for a Monitoring Officer and 4 hours for a Senior Planning Officer per trigger.
- 13.5 Monitoring fees will be adjusted for inflation against Retail Price Index (RPI) of July 2021. Given that the county council starts to incur costs associated with managing and monitoring the legal agreement from the point it is signed, all monitoring fees will need to be paid prior to commencement of development.
- 13.6 Monitoring fees are a new requirement arising from the Guide and therefore were not requested in the original response to the planning application (**Appendix C**). Further information on monitoring fees is available in section 5.5 of the Guide (**Appendix D**).

14.0 Fire Hydrants

- 14.1 The county council, in its capacity as the Fire and Rescue Authority (FRA), has statutory duties under The Fire and Rescue Services 2004 and must make provisions for:
- extinguishing fires in their area
 - protecting life and property in the event of fires in their area
 - rescuing and protecting people in the event of a road traffic collision, and
 - rescuing and protecting people in the event of other emergencies.
- 14.2 The capability and availability of water resources to fight fires is a key consideration for the Service. All dwellings must be adequately served by fire hydrants in the event of fire. The county council as the Statutory Fire Authority has a duty to ensure fire fighting facilities are provided on new developments. HCC therefore seek the provision of hydrants required to serve the proposed residential units by the developer through a planning condition. If the developer does not provide the hydrants required as a direct result of their development the responsibility and cost would fall upon the county council.

- 14.3 In addition, buildings fitted with fire mains must have a suitable hydrant provided and sited within 18m of the hard-standing facility provided for the fire service pumping appliance.
- 14.4 Paragraph 6.1(c) of BS 5588-5 2004 states that every building needs to have a suitable hydrant:
- Not more than 60m from an entry to any building on the site;
 - Not more than 120m apart;
 - Preferably immediately adjacent to roadways or hard-standing facilities provided for fire service appliances; and
 - Not less than 6m from the building or risk so that they remain usable during a fire (generally a water supply capable of providing a minimum of 1500 litres per minute at all times should be provided).
- 14.5 The provision of public fire hydrants is not covered by Building Regulations 2010 (Part B5 as supported by Secretary of State Guidance 'Approved Document B') and developers are expected to make provision for fire hydrants to adequately protect a development site for fire-fighting purposes.
- 14.6 The provision of fire hydrants is sought from this development, sufficient to address the needs of the proposed development in the event of a fire, as opposed to a financial contribution. In practice, the location and number of hydrants is determined at the time the water services for the development are planned in detail and the layout of the development is known which is usually after planning permission is granted.
- 14.7 Fire hydrants should be designed into the development at the masterplanning stage and implemented through a planning condition. The following condition wording should be used:

No above ground works shall take place until a scheme for the provision of adequate water supplies and fire hydrants, necessary for firefighting purposes at the site, has been submitted to and approved in writing by the Local Planning Authority. The development shall not be occupied until the scheme has been implemented in accordance with the approved details.

Reason for condition: to ensure adequate water infrastructure provision is made on site for the local fire service to discharge its statutory firefighting duties.

- 14.8 Further information on fire hydrants is available in the technical appendix to the Guide, *Technical Appendix 8: Fire and Rescue Service (Appendix R)*.

15.0 Audit Trails and Monitoring

- 15.1 Information regarding Section 106 deeds and the obligations relating to the county council and its services are kept in both paper form and in electronic databases. These enable effective monitoring and reporting of Section 106 matters both internally to Members and service departments and externally to District/Borough Councils three times a year, and to developers and members of the public yearly via the Infrastructure Funding Statement. HCC related Section 106 matters and processes are also regularly audited and, if necessary, recommendations are made to senior officers to ensure improvements can be made where possible.
- 15.2 When Section 106 funding is received, each contribution is allocated an individual reference enabling each one to be individually managed, monitored and reported on.
- 15.3 Before Section 106 funding can be spent by a service provider, a request needs to be submitted setting out amongst other details, the Section 106 funds being sought (including identifying the individual accounts) and the purposes/projects each will be used towards. This request is then assessed to ensure compliance with the terms of the Section 106 deed and the requirements of Section 106 contributions. The request must then be authorised by the Assistant Directors of HCC Property and Finance, the Assistant Chief Legal Officer and reported to the Executive Member for Resources. Members of the relevant electoral divisions are also informed.

16.0 Summary and Conclusions

- 16.1 HCC is seeking the financial contributions set out in this Statement, together with fire hydrant provision to be secured through a planning condition, to mitigate the impact of this proposed development.
- 16.2 It is considered that these requirements meet the tests set out within Regulation 122 of the Community Infrastructure Levy Regulations 2010 (as amended 2019) and paragraph 57 of the NPPF. This is as follows:

- Necessary to make the development acceptable in planning terms:-

Recognition that contributions should be made to mitigate the impact of development are set out in planning related policy documents as outlined above (see Section 2). The provision of community facilities is a matter that is relevant to planning.

The development plan background supports provision of planning contributions, through *Policy IM2 (Planning Obligations) of the Welwyn Hatfield District Plan*

(adopted in April 2005) and *Welwyn Hatfield Borough Council's Planning Obligations Supplementary Planning Document (SPD)* (adopted February 2012). In addition, emerging Policy SP13 (Infrastructure Delivery) contained within the Draft Local Plan Proposed Submission Document (2016) also states that '*To support the delivery of sustainable communities, the Council will ensure that suitable provision is made for new or improved infrastructure, required to meet the levels of growth identified in this Local Plan.*'

This plan has gone through the hearing sessions stage of examination and the current proposed main modification to the policy to clarify the council's approach to infrastructure delivery in relation to the adopted Planning Obligations SPD is contained within examination document EX235.

The HCC Guide (**Appendix D**) and its technical appendices covers the requirement for development to provide for its infrastructure consequences in terms of specific county council service and infrastructure requirements. The approach to seeking contributions as set out within the Guide is consistent, fair and transparent, providing certainty to all involved in the process.

As set out in this Statement the county council have analysed the existing capacity of the various service requirements and notes that there is insufficient spare capacity to mitigate the impact of this development. Therefore, the contributions sought will ensure that additional impacts arising from this development are able to be mitigated and the contributions are therefore ***necessary to make the development acceptable in planning terms.***

- Directly related to the development:–

As set out in detail in this Statement the contributions will only be used towards services and facilities which are in the locality of, and therefore mitigating, the proposed development. These mitigation projects are therefore ***directly related to the development.***

Only those fire hydrants required to provide the necessary water supplies to the buildings comprising this proposal for fire fighting purposes are sought to be provided by the developer. The location and number of fire hydrants sought will be directly linked to the water scheme designed for this proposal.

- Fairly and reasonably related in scale and kind to the development:–

The financial contributions sought to mitigate this development are based on the likely population arising from it. This has been calculated using the Hertfordshire Demographic Model which allows the specific yield and population for each service to be calculated based on the specific size, type and tenure of each individual

dwelling or unit. The calculation of need is based on a robust and up to date methodology, which allows the proportionate impact of the specific development to be calculated. Therefore, the level of contributions sought from this development are ***fairly and reasonably related in scale and kind to the development***.

Only those fire hydrants required to provide the necessary water supplies to the buildings comprising this proposal for fire fighting purposes are sought to be provided by the developer. The location and number of fire hydrants sought will be directly linked to the water scheme designed for this proposal.

Ends (4 May 2022)

Planning obligations guidance - toolkit for Hertfordshire

Hertfordshire County Council's requirements

January 2008



www.hertsdirect.org



Contents

1. Introduction
2. Background
3. Structure
4. Coverage
5. Status and Consultation
6. Review
7. National Policy Context
8. Local Policy Context
9. Planning Obligations Sought
10. Application and Thresholds
11. Sustainable transport
 - Policy background
 - A two strand approach
 - The standard charge – Residential development
 - The standard charge – Non residential development
 - Practicalities and exceptions
 - Off site car parking improvements
 - Travel plans
12. Education, Library, Youth, Childcare, Fire and Adult Care Obligations
 - Education
 - Libraries
 - Youth
 - Childcare
 - Fire and Rescue Services
 - Special Needs Housing and Services and key worker housing
 - Circumstances where Contributions will not be required

13. Other Services where Planning Obligations may be required

- Archaeology, Biodiversity and other Environmental Issues
- Minerals and Waste
- Waste Management

14. The Legal Agreement

15. Appeals

16. Indexation, Receipt and Expenditure of S106 monies

Appendices

1. Background Paper (justification for Education, Youth, Childcare and Library charges)
2. S106 agreement model precedent
3. S106 unilateral undertaking model precedent
4. The County Council's approach on detailed matters relating to S106 contributions/obligations
5. The County Council contact list
6. List of Hertfordshire Local Planning Authorities

1. Introduction

- 1.1 This document incorporates the 5 key planning themes of the Government's planning agenda; Transparency, Clarity, Certainty, Speed and Practicability, and seeks to achieve the following aims:-
- To provide information on Hertfordshire County Council's ("the County Council") planning obligation requirements in a single document.
 - To provide evidence of and promote good practice.
 - To provide guidance to Hertfordshire's Local Planning Authorities (LPAs) in the formulation of policy, particularly Supplementary Planning Documents (SPDs).
 - To inform and guide planning applicants.
 - To act as a material consideration in the planning applications decision making process, following on from the Structure Plan and in advance of Local Development Framework policy.
- 1.2. It is also aimed at all persons involved in town planning processes such as the making of planning applications and particularly professionals such as town planners, surveyors, lawyers and highway engineers working within the County Council, the District/Borough councils and the development industry.

2. Background

- 2.1. The Government's Sustainable Communities Agenda seeks to deliver a step change in the quality of life in our communities, involving better quality public services such as education and community facilities, good public transport and transportation infrastructure, as well as decent homes and a safe and healthy environment.
- 2.2. The planning obligation system is key to assisting in the delivery of the above objectives. Recently, planning obligations have been the subject of extensive public and media interest. In addition, the County Council is increasingly seeking contributions on more proposals and for wider purposes, therefore seeks that robust and transparent procedures are in place to manage the process of securing such obligations.
- 2.3. The Government and planning applicants who submit planning applications are also increasingly seeking a more efficient and cost effective turnaround on planning permissions from LPAs. The processing of planning obligations, whether in the form of a s106 agreement or unilateral undertaking, is an integral part of the planning application process and accordingly there is increasing pressure on those involved in the planning process to respond to that need.
- 2.4. For these reasons, planning obligations were identified as one of a number of areas where the common development of guidance / provision of expertise could usefully form part of the bid made by the

local authorities of Hertfordshire to become a pathfinder area for enhanced two-tier working, (in response to the Invitation to Councils published with *Strong and Prosperous Communities – The Local Government White Paper* on October 26, 2006). The bid will act as a 'memorandum of understanding' between the local authorities and a basis for future joint working with a range of partners. Hertfordshire has achieved Pathfinder status and this was confirmed in a ministerial statement in July 2007.

- 2.5. This guidance has been drawn up to clearly set out the way in which the County Council will deal with the negotiation, preparation and completion of all planning obligation agreements in the future. There will be a need to develop, amend and review it in the future in the light of experience and any future government advice and guidance.

3. Structure

- 3.1. The guide provides information on the need and justification for seeking planning contributions. It advises on thresholds above which contributions/provision will be sought, standard charges, guidance as to when and where standard charges are not appropriate (for instance on large developments), situations where further consideration will be required to determine appropriate provision and when or where contributions may not be required. It also advises on how contributions will be spent.
- 3.2. The appendices provide information on the formulation of legal documents, including: -
 - providing model templates for agreements and unilateral undertakings;
 - the County Council's approach on detailed matters relating to S106 contributions/obligations;
 - fee structures;
 - indexation and;
 - the County Council's approach to the drafting of S106 documents.

4. Coverage

- 4.1. Both the County Council and the District/Borough LPAs seek planning obligations either through the implementation of 'saved' local plan policies or more recently through local development documents. There are 11 LPAs within Hertfordshire comprising the Borough Councils (BC's), the District Councils (DC's), and the County Council, all of which are the determining authorities on planning applications in the county.
- 4.2. The LPAs fulfil a statutory function and in so doing are required to consult other statutory bodies such as the highway authority, fire authority, education authority and other interested parties. This guide

relates to the County Council's statutory functions in Hertfordshire and provides information in relation to county requirements in so far as they relate to services provided by the County Council. Discussions on development proposals should always take place with the relevant local planning authority first, before contact is made with the County Council on its requirements. A list of LPA contact details can be found at appendix 6

- 4.3. The DC's and BC's may also seek planning obligations in relation to development proposals but as they may be specific to each Borough/District area, such requirements fall outside the scope of this document. This guide covers those obligations required to meet needs in respect of the provision of highways and transportation, education, libraries, youth and childcare facilities, fire and rescue provision, key-worker housing, and special needs facilities. It also covers the approach currently being taken on other matters such as waste and minerals, economic development etc.
- 4.4. It should be noted that the approach adopted in North Hertfordshire district is slightly different to that elsewhere in Hertfordshire at the present time. This is because work was undertaken in 2006 to justify standard contributions in respect of sustainable transport, education, youth, childcare and library requirements, in preparation for their Supplementary Planning Document. It is intended that the SPD will be reviewed in due course in order to bring the requirements within this district in line with the County council's up to date information in the future. Reference should be made to the website, <http://www.north-herts.gov.uk/council/default.asp?step=4&pid=1148> for more information on specific requirements in this district.
- 4.5. It should also be noted that other LPA's may develop SPD after this document has been approved and where this occurs such documents will take precedence over this document.

5. Status and Consultation

- 5.1. This guide has been developed by County Council officers in consultation with members and has been approved by County Council's Cabinet on 21 January 2008. The views of district planning authorities and development industry stakeholders were sought through a consultation process undertaken during August –October 2007. The Toolkit is produced for guidance purposes and is not a statutory planning document. The LPAs have the responsibility of weighing up the importance of this document and requirements for obligations against competing requirements/issues when considering planning applications. The LPAs of Hertfordshire are also encouraged to refer to this document in the preparation of their Local Development Documents.

- 5.2. This document is available to view on the County Council's website at www.hertsdirect.org/planningobligationstoolkit It may also be viewable on district/borough websites.

6. Review

- 6.1. This document will be reviewed regularly and updated/amended as considered necessary (likely to be on an annual basis). Such review will also ensure that the information used in calculating contributions (i.e. building costs, census information), is up to date and base figures accurately reflect costs.
- 6.2. At a national level, the town planning system has recently been, and remains, the subject of review and change. The County Council has noted the Government's desire to change the planning obligations system via consultations on the Planning Gain Supplement and may need to reconsider its approach at an appropriate time in the future. It is important that the County Council responds positively to the challenges that this may bring. Consideration may be given to the development of the new standard planning charge and/or tariffs where necessary and appropriate, to fit particular local circumstances.

7. National Policy Context

- 7.1 The statutory provisions for planning obligations are set out in Section 106 of the Town and Country Planning Act 1990. Circular 5/05 Planning Obligations provides guidance on the use of planning obligations. They may: -
- restrict development or use of the land;
 - require operations or activities to be carried out in, on over or under the land;
 - require the land to be used in any specified way or;
 - require payments to be made to a local authority, either in a single sum or periodically ("S106 Contributions").
- 7.2 Planning obligations (or S106 agreements) are private agreements negotiated between local planning authorities and persons with an interest in land. They are intended to make acceptable development which would otherwise be unacceptable in planning terms. An obligation, must only be sought where they meet all of the following tests:-
- relevant to planning;
 - necessary to make the proposed development acceptable in planning terms;
 - directly related to the proposed development;
 - fairly and reasonably related in scale and kind to the proposed development; and
 - reasonable in all other aspects.

- 7.3 Where necessary, planning obligations make otherwise unacceptable development acceptable in planning terms. They may be used to prescribe the nature of a development, to compensate for loss or damage created or to mitigate against the impact of the development and can take one of two forms: -
- a private, mutual agreement between local authorities and those with an interest in land or;
 - a unilateral undertaking proposed by those with an interest in the land.
- 7.4. In line with the broad aims of the Government Circular 5/05, the County Council will ensure that obligations are handled in a fair, open and reasonable way and that they enhance and enable development to go ahead which would otherwise be refused. Planning obligations can relate to matters other than those covered by the planning permission, but only provided there is a relationship between the planning obligation and the planning permission. Planning obligations cannot be sought or accepted where this connection does not exist or is considered to be too remote. Unacceptable development should never be permitted because of unnecessary or unrelated benefits offered by Planning Applicants.
- 7.5. Audit Commission and Government advice encourages the use of standard charges and formulae where appropriate and recognises that these may give greater certainty to developers and speed up negotiations. Where appropriate, the County Council may explore pooling of S106 contributions from a number of different developments in order to fairly and efficiently mitigate their combined or cumulative effects.
- 7.6. Planning Policy Statement 12 (PPS12) sets out the Government's advice to Local Planning Authorities on the preparation of local development frameworks. The Hertfordshire authorities may prepare supplementary planning documents on the subject of planning obligations. The information contained in this document is written with the aim of assisting in the preparation of such documentation.
- 7.7. PPS12 also indicates that the capacity of existing infrastructure and the need for additional facilities should be taken into account in the preparation of local development documents. Plans exist to undertake an infrastructure study across Hertfordshire in 2008.

8. Local Policy Context

There are various tiers of local government which produce policy relevant to planning obligations.

8.1. Regional Spatial Strategy

Policy IMP1 of the East of England plan aims to increase investment in infrastructure and Policy IMP2 is concerned with establishing consistent approaches to the negotiation of planning agreements through partnership arrangements.

8.2. Local Plans and Local Development Frameworks

The Hertfordshire District Local Planning Authorities and County Planning Authority produce local planning policies which address the need for planning obligations. The Planning and Compensation Act 2004 requires that local planning authorities produce new style Local Development Frameworks to replace local plans and it anticipated that these will also include policies relevant to planning obligations. Authorities may also produce more detailed information in Supplementary Planning Documents or Area Action Plans.

9. Planning Obligations Sought

9.1 The County Council is responsible for ensuring the provision of a range of services and seeks contributions and/or facilities from development which would have an additional impact on service provision, including:

- Sustainable transport measures such as highways and rights of way improvements (including payments for the provision of roads, byways, footpaths, bridleways, cycle ways, bridges, bus infrastructure and/or traffic signals as may be required)
- Passenger Transport
- Education
- Libraries
- Youth & childcare
- Fire and rescue services
- Adult care services – special needs accommodation and other services
- Other matters such as economic development, archaeology, waste facilities, green infrastructure, key worker housing.

9.2 Please note that the LPAs may seek planning obligations themselves for other matters, such as open space, sports and recreation facilities, affordable housing etc.

10. Application and Thresholds

10.1. The threshold for seeking contributions/obligations for residential developments is one dwelling. It should be noted, however, that Hertfordshire's LPAs may set their own thresholds or deem contributions inapplicable in certain instances and this should be checked with the local authority responsible. The threshold has been set to ensure fair treatment of all developments and to reflect the fact

that small projects may not in themselves have an impact on infrastructure, services and facilities within an area, but collectively they do create additional demands.

- 10.2. The use of formulae and standard charges is a means of addressing the likely cumulative impact of development in a fair and equitable way. Developers will be required to make financial contributions to fund both on and off-site provision as appropriate.
- 10.3 In relation to sustainable transport charges, planning obligations are sought from all types of development. For non residential development a contribution will be required where one or more vehicle parking spaces are needed. Where other services are concerned, planning obligations are in general only sought from residential development. They are not usually sought from commercial development, except in some instances by the Fire and Rescue Service.
- 10.4 In the case of education, the County Council will assess demand generated by development. It will also assess whether the capacity and quality of the existing services, facilities or infrastructure can cope with that additional demand. Applicants are encouraged to contact the County Council to determine whether contributions are required in each case.
- 10.5 A review of other services will be undertaken on a regular basis to check whether contributions are necessary.
- 10.6 The Toolkit is designed for use in relation to small and medium sized developments. Contributions from developments of less than 300 dwellings can be calculated using the table calculators shown below. These tables illustrate the effect of threshold requirements for dwellings and the charges that could apply. Developments larger than 300 units will be considered individually and specific on-site or off-site provision may be sought for land or built facilities such as schools and other community facilities. Note however that for highway matters this figure will, depend on local circumstances and should be checked with the relevant highway engineer. As mentioned at paragraph 6.2 large scale growth may be handled in a different manner, perhaps through a tariff approach. Each case is likely to be different with needs which must be assessed individually.
- 10.7 The County Council and 10 districts/boroughs have produced a joint bid to the Government to fund an Infrastructure Study /Strategy for Hertfordshire, to determine the impact of the growth agenda. On 3rd October, 2007 the Hertfordshire Leaders Group considered the proposal, and agreed, subject to expressing continued opposition to the scale of growth proposed for the County, that the eleven authorities should support this initiative. The agreement to support the preparation of the Strategy was made conditional on the eventual funding arrangements.

- 10.8 Where land is required, the cost of provision of the land and all services will normally be borne by the developer.
- 10.9 The charge will apply to the net number of dwellings or floor space gained where an application involves demolition. For example, if it is proposed to build 20 dwellings in total, involving the demolition of 3, the standard charge would apply to 17 dwellings. For highway matters a change of use could lead to a different type of generated trip, therefore the level of net gain should be checked with the relevant highway engineer, e.g. a previous business use would have different trip characteristics to new residential.
- 10.10 The size of an application is likely to have a bearing on whether the obligations are contained within a S106 agreement or a unilateral undertaking. It is suggested that discussions take place with the appropriate local planning authority to determine which document type is considered suitable. Generally however, at the application stage (not in the case of appeals) unilateral undertakings tend to be suitable for small or minor developments, where affordable housing is not required.

11. Sustainable Transport

- 11.1 Planning obligations in relation to highway matters are sought by officers working within the Transportation Planning and Policy Unit of the County Council. Contact details can be found at Appendix 5.

Policy background

- 11.2 PPG 13 promotes accessibility to jobs, shopping, leisure facilities and services by public transport, walking and cycling and seeks to reduce the need to travel, especially by car. New development should be located so as to help achieve this objective. The County Council's Local Transport Plan has developed strategies and plans for the County and the towns and areas within it which identifies the sustainable transport and accessibility measures for which contributions would be sought.
- 11.3 Planning obligations can be used to ensure developments have safe access and egress, minimise development-related impacts such as traffic congestion, and maximise accessibility by non-car modes. In addition, well designed and located sustainable transport facilities such as cycle ways, footpaths and greenways can provide links between habitats and provide opportunities for biodiversity.
- 11.4 The Government is committed to sustainable development and will promote greater use of passenger transport. Measures to assist passenger transport are therefore an integral part of good land use and transport planning. In addition, the Government has in recent years

increased the emphasis on accessibility planning, which has become a prerequisite of the Local Transport Plan 2 requirements for 2006-2011. To comply with this policy the County Council will actively seek planning obligations which will improve facilities and services for passenger transport users who are using the development and generally for those users in the surrounding area. The following items are likely to be considered as appropriate for developer contributions towards the cost of providing passenger transport:-

- subsidy for the bus service for a set period;
- a commuted payment to provide a subsidy for the bus service;
- purchase of vehicles;
- payment and purchase of infrastructure including bus stations, rail stations, bus/rail interchanges, real time information and bus stops/shelters;
- provision of new and/or amended highway networks, including highways/footways which will not be adopted, which are built to a specification determined by the County Council for local bus operation and may include bus priority measures within or adjacent to the development.
- payment towards information, publicity and marketing campaign material to increase awareness and the use of bus and rail services;
- Payment towards community transport services. Further guidance is contained in the 'Passenger Transport in New Developments – A Guide for Hertfordshire' document. This is available from the Passenger Transport Unit.

A two strand approach

11.5 Measures to ensure safe access and egress to a development and measures to minimise development related impacts are typically met by road and other infrastructure improvements in the area around the development where safety issues and traffic impacts are most concentrated and significant using s106 agreements (or s278 agreements under highways legislation). These requirements are usually identified through Transport Assessments ("TAs") or via site specific negotiations. All developments above the threshold of 100 residential units, or 2500sqm B1 office development or equivalent peak hour trip generation are considered as large developments and the planning applications must be accompanied and supported by a Transport Assessment.

11.6 Smaller developments do not always require TAs but the cumulative impacts of smaller developments are very significant and may well exceed those of larger developments in total. There is a need, therefore, for all developments to contribute towards maximising accessibility by non-car modes in line with the Hertfordshire Local Transport Plan objectives. Often for the smaller developments a Transport Statement or simplified Transport Assessment will be

required to identify the issues and impacts associated with a development and the required measures and appropriate transport contribution. Transport assessment details are set out in the DfT guidance and available on their website.

- 11.7 The Council will, therefore, use a two strand approach to planning obligations in order to address the immediate impacts of new development (the first strand) as well as the cumulative impacts of all development, large and small, on non-car networks (the second strand). The 'second strand' approach will provide pooled funding aimed at making an impact towards achieving a modal shift away from the private motor vehicle. The need for second strand contributions will be balanced against the level of first strand contributions and any other relevant planning matters. For smaller developments the provision of passenger transport requirements outlined in section 11.4 will generally be included as part of the second strand charge.
- 11.8 This funding is intended to help enhance non-car accessibility within the catchments of new development. Funds will be spent on local schemes, as identified in the Local Transport Plan (LTP) and in the urban transport plans. Schemes in addition to these plans will be considered where they are identified in other recognised strategies and a need has been identified as a result of new development. These may or may not be designed in detail at the time the contribution is paid, nevertheless, such funding should relate reasonably to new development and remain necessary to ensure its acceptability, thus conforming with current obligation criteria and PPG 13 requirements. This approach:
- rewards developers who locate new development in accessible locations where on-site parking provision is reduced below unfettered demand levels without threatening viability;
 - penalises developers who locate new development in sub-optimal locations; and
 - Makes town centre development cheaper than that in out-of-town locations.

The Standard Charge: Residential Development

- 11.9 A means of reflecting the accessibility of different locations is required to ensure reasonableness. This should ensure that obligations relate to development impacts, which should be reduced in those locations that are more accessible by non-car modes i.e. the better the existing accessibility by non-car modes, the lower the charge should be. It is proposed to base this variation on the number of on-site car parking spaces required, as this is a good proxy for traffic impact: the better the accessibility, the fewer the spaces needed; the fewer the spaces, the lower the traffic impact. A reasonable benchmark charge for a single

parking space for residential development (including garages) should also be of the order of £500. ¹

11.10 North Hertfordshire District Council have now produced and formally adopted an SPD for Planning Obligations which may be followed by the remaining planning authorities in the County. It should be noted that the charges shown in table 1 originate in the North Hertfordshire SPD but will apply across Hertfordshire, unless alternative arrangements are set out in emergent SPD for individual authorities. Where this occurs, links to new SPD will be published on the County Councils website.

11.11 The parking provision required for residential development will vary according to the accessibility of the site by means of travel other than private car. Accessibility will be defined by a zoning process detailed in guidance (SPD) produced by the Local Planning Authorities, which is generally available on the LPA's websites.

11.12 Using the relationships between parking standards, charges will vary as follows:

Table 1: Sustainable Transport Second Strand Approach: Standard Charges for Residential Developments:

Location	second strand charge per dwelling (£)			
	number of bedrooms			
	1	2	3	4+
Town centre zones 1&2	£375	£500	£750	£1000
Elsewhere zones 3&4	£625	£750	£1125	£1500

The contributions to be Index linked by SPONS from July 2006 (the point in time at which the above figures were calculated)

For an explanation of the figures see footnote¹.

The Standard Charge: Non-Residential Development

11.13 The residential charge provides a benchmark against which non-residential charges can be set. The appropriate basis for comparison is some measure of traffic impact; the greater that impact, the greater the need for accessibility measures. As with residential development the parking provision required for non-residential development will vary

¹ The standard charge rate is derived from an assessment of the quantum of housing/likely number of parking spaces to be provided in North Hertfordshire and the level of private investment in infrastructure as a percentage of LTP capital investment. In addition benchmarking against other local authorities has been used as a check to determine reasonableness. There is a background paper associated with the North Hertfordshire SPD which provides more detail and is available on request.

according to the accessibility of the site by means of travel other than private car. Accessibility will be defined by a zoning process detailed in guidance (SPD) produced by the Local Planning Authorities, which is generally available on the LPA's websites.

11.14. Non-residential charges will be calculated at a rate per on-site car parking space required, mirroring the residential charge where a charge of £500 equates to one space. Thus, for small commercial developments an accessibility charge of £500 per parking space required or £1000 per one, peak hour two-way trip is used². This approach means that more accessible sites will incur lower charges in accordance with the zone-based parking provision.

Practicalities and exceptions

11.15 In all cases, contributions will be passed directly by the developer to either the planning authority or the highway authority as appropriate. Expenditure assessed in this way will include not only capital scheme costs but also administration costs, fees and any contingencies incurred in connection with a scheme.

11.16 It is intended to impose the second strand charge for one or more dwellings and for all non-residential developments in order to fully mitigate cumulative impacts.

11.17 The charge for non-residential developments will be calculated on the basis of the parking provision actually required on-site in line with the LPA's adopted guidance on vehicle parking.

11.18 Non-payment of the second strand charges will be considered only in very exceptional circumstances. These circumstances may include development where all aspects of accessibility are fully addressed.

Off-site car parking improvements

11.19 In accordance with the LPA's own guidance on vehicle parking provision, the County Council may require developers to fund new car parking off-site where a shortfall in provision is identified. Developers may also be required to provide funding for Controlled Parking Zones ("CPZs") to ensure that developments do not have adverse consequences on-street. Contributions such as these will be secured within a conventional s106 agreement (i.e. second strand charges are not for this purpose).

² During the am peak hour a typical 2 bed house (with average accessibility by passenger transport) will generate 0.5 two-way trip or will have 1 car parking space. 1 space is equivalent to £500, it is therefore reasonable to assume 1.0 peak hour two-way trip = £1000.

Travel Plans

11.20 Where Travel Plans are secured as part of the planning permission, the County Council will seek contributions towards Travel Plan measures and the cost of on-going monitoring within a conventional s106 agreement, as in the case above. Some of the measures may be “target triggered” but are unlikely to be second strand related. Travel Plans are normally required when an application is supported by a TA for developments that have significant transport implications. Further guidance on travel plans is available on the county council’s website at <http://www.hertsdirect.org/envroads/roadstrans/transplan/hdc/greentravelplans/>

12. Education, Youth, Childcare, Adult Care, Fire and Library Obligations

- 12.1. This section outlines the role of the County Council in seeking planning obligations in relation to education, youth, childcare, libraries and fire services.
- 12.2. Planning obligations for these areas are sought by officers working within Hertfordshire Property acting on behalf of the Children Schools and Families, the Adult Care and the Fire and Rescue Services. Further advice can be obtained from Hertfordshire Property and contact details can be found at Appendix 5.
- 12.3. The planning obligation charges are based on a formulaic approach and are summarised in a contribution table below. More detailed information in relation to the methodologies used may be seen in the background paper (Justification for Education, Youth, Childcare and Library Charges) at Appendix 1.
- 12.4. Hertfordshire Property has developed a model to estimate the population arising from new residential development which is tailored to the proposed size, type and tenure of dwellings. This enables an assessment to be made of the provision of services which will be required to meet the needs of the development (such as the number of school places). Where dwelling details are not certain the effect of different dwelling mixes can be tested using the indicative contributions table. Where applications are being made in outline and the final mix/number of units is unknown, the table can be included in the S106 document. However, it should be noted that the indicative contributions table is not appropriate for larger developments, for instance, those giving rise to need for a new school. Individual negotiations are appropriate in these circumstances. As a rule of thumb, 1000 dwellings give rise to the need for one form of entry at primary school level.
- 12.5. Information on the age profile of residents in households was obtained in the 2001 Census and this has been tabulated by dwelling type and tenure. Households moving in the year prior to Census Day are shown

to have an atypical age structure compared to households in general. In these “migrant” households there is a bias towards younger children and younger adults and smaller proportions in older age groups.

- 12.6. The migrant population and age profile information from the Census is incorporated into the model which allows for the child population resident in the development to change with time, as children grow older and population in the development starts to conform to an age structure in line with the wider community. The result is a forecast of population that changes over time and often includes a peak in demand, in the short to medium term – for example, as the larger numbers of pre-school children in migrant households move into a primary school.
- 12.7. The number of residents in a development will determine the scale of demand on services provided by the County Council. Contributions towards each service are therefore based on relevant costs (such as the cost per school place) and the expected population in appropriate age groups. For school places it is assumed that any peak in demand may be able to be met in temporary accommodation and a lower cost per place is incorporated into the contribution calculation. At present, the library facilities contribution is the only one which is based on total development population - this contribution being based on the average of the migrant and longer term figure. Discounts are applied to all contributions required from housing for social rent, on the basis that a number of families moving into such housing are more likely to be moving locally. Intermediate housing (e.g. shared equity or key worker) is classified as market housing, since the number of occupants tend similar.
- 12.8. It should be noted that the Census data is related to the number of habitable rooms (including kitchens) that a dwelling has. For simplicity, the indicative contributions table is expressed in terms of the number of bedrooms rather than habitable rooms. As an example, a 5 habitable room dwelling is assumed to have 3 bedrooms, based on information from the Survey of English Housing (2003/04). Hertfordshire Property will provide a more precise calculation of contributions if required by referring to floor plans.
- 12.9. The 2001 Census indicates that considerable numbers of children are found in small properties. This fact has been taken into account in the indicative contributions table but has been discounted to cater for the possibility that this phenomenon might be short term or an anomaly. In the recent past, contributions have not been sought for one bedroom dwellings as it was thought unlikely that children would be resident. Further information on the calculations which sit behind the figures produced in the table below can be provided on request.

Table 2: Hertfordshire County Council other services planning obligations contributions table (excluding North Hertfordshire)

Bedrooms*	1	2	3	4	5+	1	2	3
	HOUSES Market & other					FLATS Market & other		
Primary education	£231	£1,036	£2,469	£3,721	£4,692	£93	£816	£1,392
Secondary education	£263	£802	£2,561	£4,423	£5,662	£47	£444	£1,677
nursery education	£35	£175	£340	£459	£545	£32	£195	£270
Childcare	£14	£64	£138	£199	£244	£8	£57	£89
Youth facilities	£6	£16	£50	£82	£105	£3	£13	£41
Library facilities	£98	£147	£198	£241	£265	£77	£129	£164
Total	£647	£2,240	£5,756	£9,125	£11,513	£260	£1,654	£3,633
	HOUSES Social Rent					FLATS Social Rent		
Primary education	£247	£2,391	£3,860	£5,048	£5,673	£44	£1,167	£2,524
Secondary education	£62	£450	£1,676	£2,669	£2,405	£14	£261	£1,084
nursery education	£39	£453	£475	£503	£955	£9	£216	£313
Childcare	£12	£121	£188	£226	£277	£4	£65	£113
Youth facilities	£2	£8	£31	£51	£55	£1	£6	£21
Library facilities	£48	£91	£130	£156	£155	£38	£82	£107
Total	£410	£3,514	£6,360	£8,653	£9,520	£110	£1,797	£4,162

*uses an assumed relationship between bedrooms and habitable rooms

All figures are subject to indexation and will be indexed using the PUBSEC Index from the base of 175. (175 is the index for 4th Quarter 2006 (September 2007 publication))

Education

12.10. The County Council is the Local Education Authority and has statutory responsibility for the provision of education services. It has a duty to ensure that there are sufficient school places to meet the needs of the population. This provision includes nursery, primary, secondary and sixth-form education and special needs services and facilities.

12.11 Hertfordshire Property will advise on whether contributions are required for education facilities, having taken into account the local capacities at primary and secondary level.

12.12 In some instances, where there is short term pressure only and where permanent facilities are unlikely to be built, contributions may be sought for temporary classrooms or other alterations required. In other cases, where new residential developments will put existing school facilities and the curriculum under pressure, contributions may be sought to improve buildings, for instance by modifying internal layouts.

Libraries

12.13 Library services contribute to the educational, economic, social, cultural and recreational well being of the community. The County Council has a duty to provide a comprehensive and efficient library service for everyone who lives, works or studies in the County. Facilities can range from large central libraries within towns, to community libraries and mobile facilities.

12.14 New residential development will add pressure on the library service through increased demand. The likely impacts have been looked at in the context of the Government's Public Library Service Standards ("PLSSs"). These are assessed on a countywide basis. Of the ten standards Hertfordshire fully meets six. The remaining four standards are areas where improvement is required and additional demand by proposed development will impact on the County Council's ability to achieve these. These standards are as follows:

- The total number of electronic workstations with access to internet and library catalogue per 10,000 populations (PLSS4).
- Library visits per 1,000 population (PLSS6).
- Percentage of library users 16 and over who view their library service as good or very good (PLSS7).
- Percentage of users under 16 who view their library service as good (PLSS8).

12.15 Hertfordshire has recently launched its 'Libraries for the 21st Century' Change for Excellence 2005-2015 initiative. This takes account of national and local policy and sets out proposals for the improvement of Hertfordshire's library service. www.hertsdirect.org/libisleisure/libraries/services/L421C/ contains further details. The aim is to improve all libraries to be fit for the 21st Century.

12.16 The County Council believes that its libraries need to be updated to continue to improve the service offered and cope with additional demand brought about by new development. This will be set against the Government's PLSSs and the 'Libraries for the 21st Century' initiative. The transformation needs to include exteriors/interiors of buildings, opening hours, stock, IT, promotion and customer care. The current library network is being reformed to provide fewer but better static libraries that are able to meet: PLSS4 (an increase to the total number of electronic workstations).

- 12.17 Library facilities provided in attractive buildings with retail standards of décor, furniture and fittings will reduce the general cost of provision and increase usage.
- 12.18 Areas of stress on the libraries service in Hertfordshire can be considered. Although PLSSs are assessed on a county-wide basis, they can be tested at a district level. PLSS4 and PLSS6 may be taken as indicative of pressure on floor space and general satisfaction with the service.
- 12.19 The County Council provides a mobile service. This has recently been entirely overhauled with new routes and a new fleet of vehicles. However, as new housing developments arise the number and location of stops has to be reviewed and large developments may require the addition of new vehicles as appropriate.

Youth

- 12.20 As required by the Education Act, 1944, the County Council provides youth services for 13-19 year olds such as social/meeting places plus support, information, advice and informal education opportunities. These responsibilities are distinct from and complementary to provision that may be sought from the district councils from a leisure perspective. The youth service also supports and works in partnership with the district/borough councils and local voluntary/community organisations to enhance local provision.
- 12.21 The County Council works within current national and local requirements and developments, in particular the Government strategies, 'Every Child Matters', 'Youth Matters' and 'Transforming Youth Work - Resourcing Excellent Youth Services'.
- 12.22 'Resourcing Excellent Youth Services', published in 2002, sets out standards for youth work provision. It has a target that 25% of the total population aged 13-19 should be actively reached. Objective 2 states that authorities must secure convenient and suitable access for young people to high quality youth work in safe, warm, well-equipped locations. Objective 3 states that provision should be attractive and relevant to promote participation by the target population.
- 12.23 The objectives above underlie that where such facilities are not available, young people often feel they are not valued as part of their community. As a result there may be increased incidents of youth nuisance and vandalism. In order to overcome this, the youth service supports young people's transition to adulthood by providing alternative opportunities that enable them to reach their full potential. This is of benefit not only to young people but also the wider community.

- 12.24 The DFES Youth Matters - Next Steps identifies a need to modernise centres for young people, to increase a range of activity spaces and educational resources plus and where appropriate extend the range of activities for young people with disabilities. In some cases there is a need to relocate services in terms of the existing and future population. The provision of youth facilities and activity programmes makes an important contribution to reducing crime and disorder and encourages social inclusion for young people. New residential development may generate a proportion of young people, resulting in an increased demand for youth provision. This will require additional resources to enable equal access to activities in the area.
- 12.25 A review of youth provision across Hertfordshire has been undertaken during 2007 and plans for each district are to be finalised and published during 2008. Generally, however, there is a need for improvements to modernise centres, increase storage, equipment and activity spaces and extend the range of activities for the disabled. In addition the relocation of some services to meet existing and future needs may be necessary. Contributions are therefore sought towards the cost of providing the above facilities.

Childcare

- 12.27 The County Council seeks childcare contributions from development. Contributions will be used to assist in the provision of a variety of facilities, in which Children's Centres and Extended Schools are currently a priority. These form an integral part of the National Childcare Strategy and impose a statutory duty on the County Council in partnership with private and voluntary sectors.

Children's Centres

- 12.28 Children's Centres are part of a government initiative providing universal entitlement for all children up to the age of 5. They are crucial to the delivery of the Government's 10 year Childcare Strategy which now forms part of the Childcare Act 2006. They also contribute to improving child outcomes set out in 'Every Child Matters'.
- 12.29 Hertfordshire County Council will provide 82 Children's Centres in phases by 2010, across the county. Each will cater for approximately 800 children providing integrated 'one-stop' facilities of childcare, health and parenting services. These are intended to help tackle child poverty, improve children's achievements at school and enable parents to work that may not have otherwise been able to. Although both central and local funding is available, it is often insufficient. Assistance with start up costs, and provision of accommodation are often required. Therefore, a proportion of the costs will need to be funded from new development, which generates young children.

12.30 Several Children's Centres have now been provided and although they are likely to vary in the services they provide, a real example offers a day nursery, pre-school, toy library and community learning room, toddler group and speech therapy service. Others may simply provide a local administration base from which service provision is organised.

Extended Schools

12.31 Extended Schools will offer children, young people, families and the community access to a range of services through their local school. This would include childcare for school age children before and after school and within the summer holidays, which is becoming increasingly important for working parents. By 2008 one half of all primary schools and one third of secondary schools and by 2010 all schools will have access to these facilities.

12.32 Contributions are therefore sought towards the cost of providing the above facilities.

Fire and Rescue Services

12.33 The County Council, in its capacity as the Fire and Rescue Authority, has a statutory duty to ensure that all development is provided with adequate water supplies for fire fighting. Therefore, the developer is required to provide fire hydrants for all new developments above the threshold.

Paragraph 6.1(c), of BS 5588-5 2004 states that every building needs to have a suitable hydrant:

- not more than 60m from an entry to any building on the site;
- not more than 120m apart;
- preferably immediately adjacent to roadways or hard-standing facilities provided for fire service appliances; and
- not less than 6m from the building or risk so that they remain usable during a fire (generally a water supply capable of providing a minimum of 1500 litres per minute at all times should be provided).

In addition, buildings fitted with fire mains must have a suitable hydrant provided and sited within 18m of the hard-standing facility provided for the fire service pumping appliance.

Fire hydrant provision will be sought through standard wording in planning obligations. In practice, the need for hydrants is determined at the time the water services for the development are planned in detail, which is usually after planning consent is granted. If adequate hydrants are available when the water mains are planned then no extra hydrants will be needed. Additional work is being undertaken to consider whether there are other ways of dealing with fire hydrants, for example,

conditions attached to planning decisions and this work will inform the final document.

- 12.34 The ability of large-scale and commercial developments to be adequately served by fire and rescue services will be assessed on an individual basis. Any impacts may need to be addressed through planning obligations. This may be through the provision of a new fire station or an extension to an existing facility or alternatively, the provision of sprinklers in commercial and/or domestic properties.

Special Needs Housing and Services and Key Worker Housing

- 12.35 The County Council provides or enables the provision of services for persons with learning, physical and mental disabilities, as well as the elderly in the form of appropriate accommodation which can be provided in a variety of ways, day and resource centres. A standard charge does not at present operate for special needs services however; the need to provide facilities may become apparent on larger developments. Typically, modern housing provision for persons with mental, learning or physical disabilities takes the form of units of 8-12 flats with an office for staff. The County Council is also developing policy on the provision of housing for the frail elderly and 'extra-care' housing, in conjunction with the district housing authorities. The County Council will actively look for proposals which may be able to assist in the provision of this type of housing. Such provision may be part of the affordable housing element of a development proposal or, depending on local need may be sought over and above the affordable requirement.

- 12.36 The County Council has an agreed strategy (December 2002) with the districts and boroughs in Hertfordshire to provide key worker housing. Such provision may be provided as part of the affordable housing element of a development proposal.

Circumstances whereby Contributions will not be required

- 12.37 Sheltered housing, retirement homes, nursing homes, hostels, student accommodation, will be exempt from payment of the contributions for education, youth and childcare, but not library charges. Requirements for other specialist housing will be considered on its merits.

13. Other Services Where Planning Obligations May Be Required

Archaeology, Biodiversity and other Environmental Issues

- 13.1 There are a number of issues where it is not appropriate to have a standard charge, as it is difficult to predict and quantify likely impacts. Many issues such as the conservation and enhancement of public

rights of way (PROW), archaeology, wildlife, geology, habitats and the landscape (as well as creating opportunities for new environmental features including biodiversity) are where the County Council often advises the District as the Local Planning Authority. These issues are often equally as important as those which attract standard charges but are likely to vary considerably depending on specific site circumstances.

- 13.2. Where development has the potential to have a significant impact on the environment the County Council will support the Local Planning Authority in seeking contributions from the developer to contribute to the compensation and mitigation of these effects.

Minerals and Waste

- 13.3 The County Council is the mineral and waste planning authority for the county. The need for a Planning Obligation in relation to this type of development will be considered on a case-by-case basis. Where appropriate, the areas generally covered can include highway improvements; highway maintenance contributions; Codes of Practice for lorry routing; rights of way improvements/requirements; ecological and archaeological requirements; and land management and aftercare matters.

Waste Management

- 13.4 The County Council is the waste disposal authority and would like to look at the feasibility of introducing a general requirement for developers' contributions towards both the construction and improvement of new waste management sites, equipment and facilities and also the development and improvement of local household waste recycling centres. Such contributions would need to be justified by a robust technical assessment of need.

14. The Legal Agreement

- 14.1. Once planning obligations have been agreed in principle between the parties, a draft S106 document may be drawn up. This can be produced by the County Council, the district/borough council or the planning applicants. In the case of the County Council and the district/borough councils, planning agreements are usually handled by solicitors taking instructions from professional clients (.e.g. planning and highway officers). Model template documents are shown at Appendices 2 and 3. However, some LPA's may have their own templates/standard clauses and this should be established before using the County Council's models. The templates attached to this document provide clauses which the County Council regularly use.

- 14.2. These model templates, depending on the nature and complexity of the proposal, may need amendment and supplementary clauses added. Advice will be given on a case by case basis where necessary; however, advice on the County Council's approach to issues common on more complex cases is set out at Appendix 4.
- 14.3. Planning Applicants are required to give an undertaking to pay the County Council's costs for the preparation of legal agreements (the fee rates are set out at Appendix 4). Further advice on the legal agreement process may be obtained from the list of contacts at Appendix 5 of this document.

15. Appeals

- 15.1 If an appeal is made by a Planning Applicant, for instance where planning permission has been refused and planning obligations are a material consideration or reason for refusal, the County Council will be involved in the process. The County Council will assist in the production of S106 documents and/or the case being made to the Planning Inspectorate, and will communicate with the appellant, district/borough council and the Planning Inspectorate as appropriate. The County Council may also prepare statements or appear as witnesses at appeal hearings and inquiries as necessary.

16. Indexation, Receipt and Spending of S106 Monies

- 16.1. S106 contributions are required to be paid in accordance with the terms of the agreement or undertaking. A form is attached to the model templates which set out this process and how/where funds should be paid.
- 16.2. The County Council requires that contributions are subject to indexation to account for inflation. The following indices are/or have been used by the County Council;
- BCIS (education, youth, childcare, library, special needs charges, mainly up to September 2006)
 - PUBSEC (education, youth, childcare, library, special needs charges, from September 2006)
 - SPONS (Highways and transportation)
 - CPT (Passenger Transport – bus services)
 - RPI -occasionally, some agreements are based on RPI (for instance the provision of a school minibus).
- 16.3. Further information on calculating indexation is attached at Appendix 4, section 7.
- 16.4. Once received, S106 contributions are held in separate earmarked interest bearing accounts and spent in accordance with the planning obligation documents to which they relate. The funds are monitored

and tracked to expenditure on particular projects to ensure that expenditure occurs within relevant timeframes as set out in the legal documents. Contributions are often held for a period of time as specified in the relevant legal agreements and may be pooled toward specific projects.

- 16.5. Information on expenditure can be made available on request. Regular reports are made to members on both contributions held and planned expenditure and will also be available to the Hertfordshire LPAs. Where contributions are not spent within the timeframes set out in the documents they will be refunded to the relevant party as prescribed by the S106 document.
- 16.6. The County Council maintains a register of all planning obligations. The County Council's planning obligation processes are regularly audited internally. Following audits, recommendations are made to senior officers so that action can be taken where necessary.

End.

Planning obligations guidance - toolkit for Hertfordshire

(Hertfordshire County Council Requirements)

January 2008

Appendices

www.hertsdirect.org



Appendices

1. Background Paper (Justification for education, youth, childcare and library charges)
2. S106 agreement model precedent
3. S106 unilateral undertaking model precedent
4. The County Council's approach on detailed matters relating to S106 contributions/obligations
5. The County Council Contact list
6. List of Hertfordshire Local Planning Authorities

APPENDIX 1

Background Paper (Justification for Education, Youth, Childcare and Library Charges.

Introduction

This section provides further information on provisions sought by the County Council following on from section 12 of the Planning Obligations Guidance-Toolkit for Hertfordshire, in respect of education, libraries, youth and childcare. .

The County Council intends to keep its methodology under regular review. It is therefore likely that details of provisions and the amount of contributions sought will vary from time to time. The current contributions summary tables appear in Sections 11 and 12 the Hertfordshire Planning Obligations Toolkit document. Updated versions of these tables will be published in any revisions of this document, or can be obtained from the contacts above.

Education

The methodology for assessing the number of school places (and other provisions) required to meet the needs of residential development is based on understanding how many children are likely to be resident in the development.

The information used to calculate population in dwellings is taken from Census data. Households moving in the year prior to Census Day are shown to have an atypical age structure compared to households in general, typified by a bias towards younger children and younger adults and smaller proportions in older age groups. The age profile information is incorporated into the calculations, which are also tailored to the particular size of dwelling by taking into account the number of bedrooms/habitable rooms. For simplicity, the contributions table is expressed in terms of the number of bedrooms rather than habitable rooms, as an example, a 5 habitable room dwelling is assumed to have 3 bedrooms.

The calculations also allow for the population to change with time, as children grow older and the development settles down to conform to an age structure in line with other older settlements. The result is a forecast of demand for primary and secondary school places (and other requirements) that varies with time and often includes a peak in demand in the short term. The cost of meeting these demands is based on the County Council's experience of providing additional places and is set out in the table below. Temporary accommodation costs relate to the provision of mobile classrooms and these are appropriate only to cater for the peak demand.

Per pupil place	Cost
Primary permanent	£9,155
Secondary permanent	£14,413
Nursery education	£9,155
Temporary provision	£3,260

On larger developments the County Council may undertake a detailed assessment in order to verify the outcome of using the summary contributions table. As stated in the Toolkit, developments of over 300 dwellings will be considered individually and on site provision may be required for education (and other matters).

Libraries

The County Council believes that libraries need to continue to improve the service offered and cope with additional demand brought about by new development. The Toolkit outlines this in the context of the Government's Public Library Service Standards (PLSSs) and the 'Libraries for the 21st Century' initiative. The transformation needs to include exteriors/interiors of buildings, opening hours, stock, IT, promotion and customer care. The current library network is being reformed to provide fewer but better static libraries that:

- meet PLSS 4 for the total number of electronic workstations
- are attractive buildings with retail standards of décor, furniture and fittings
- will enable the service to be delivered within budget
- will increase usage

The Mobile service provides access to services for people for whom access to a fixed library is likely to be difficult. The mobile service has recently been fully reviewed and entirely overhauled with new routes and a new fleet of vehicles. It is therefore unlikely that further changes will be needed in the near future. However, as new housing developments arise the number and location of stops will need to be reviewed and large developments may require the addition of new vehicles and stops.

Fixed libraries in urban areas also serve surrounding rural areas and villages. Therefore, the need for contributions (and the expenditure of any library contributions received) from development in these locations will be based on the nearest library and/or the relevant mobile services.

Methodology for Calculating the Charge

Provision for library services will be required from developments within the catchment area of libraries that require improvement or are considered unsatisfactory in service delivery terms. The situation will be reviewed from time to time when the Toolkit is updated as areas of stress may change. The

amount of financial contribution required from housing developments has been calculated to reflect the number of residents expected and the costs of providing facilities. Contributions are not usually sought from commercial development but may be in the future.

The contribution is based on population and on two elements:

- A contribution towards books
- A contribution towards buildings

It is not suggested that a contribution would necessarily be used to purchase the books and building works it is based on. It will be appreciated that the holding facilities element of the contribution is based on building works on a significant scale. The costs would be disproportionate on a smaller scale. However, a contribution would be used as a capital sum to enhance provision for library services and facilities and might include, for example, IT facilities. Proposals will normally be developed once contributions have been received. Contributions are likely to be pooled to enable more effective use to be made of them but will only be spent on facilities relevant to the developments providing the contributions.

Building costs are based on new buildings. Using 30 sq m per 1,000 population, and a buildings cost of approximately £2,292 per sq m produces a buildings cost per 1,000 population of £68,760. Stock costs are based on an average cost per item of £5.73, and two books per head of population - adopted by the County Council in 1998. The cost of stock is therefore £11,460 per 1,000 population. The total contribution per person is £80, at PUBSEC 175 prices (based on $(£68,760+£11,460)/1000 = £80.22$). This figure is converted into a cost per size and type of dwelling in the Toolkit.

Youth

Hertfordshire Youth Service provides a varied planned education programme across the district. The programme covers youth councils, work with minority groups, work with schools, peer education and volunteering, arts, extreme sports, holiday activities, food & health, sporting activities, outdoor education, IT and information and is supported by street work in various locations.

Any additional users resulting from new development will increase the pressure on facilities within the county, thereby limiting service provision and affecting their usability and attractiveness to young people.

Methodology for Calculating the Charge

Hertfordshire's Youth Service offers a range of specialist and generic activities that enable young people to gain recognised accreditation for their learning. Growth in the number of young people aged 13 to 19 years (the target age group) in a community will require increased resources to enable equal access to those activities. This could take the form of new equipment and/or learning materials and/or improvements to the property to accommodate more young people or offer a wider range of activities. Additional staff will be

required to manage these activities and to maintain a safe and proportionate staff-to-young-people ratio. Start up funding for the first two years allows the County Council the opportunity to develop working relationships with local partners and to develop strategies to sustain and ensure the future life of projects.

Examples of the resource requirements for increases in demand are currently:

- Increase of 10 to 15 young people - £3,333 per project pa for start up costs - based on 1 additional member of staff to support current activities for 1 session per week, all year
- Increase of 15+ young people - £13,021 per project pa for start up costs - based on 4 additional staff offering 1 new session per week, all year.

Taking the lower figure, this means that the funding required to cover staffing costs per user per annum equates to £222 (based on £3,333/15) and accordingly staffing costs to cover the 2 year set up period would be £444. (£222 x 2) per additional user.

The Pioneer Youth Centre proposal in St Albans is used as a model of future youth provision in Hertfordshire. The intention is to provide a substantial centre of 1480 sq m, offering a range of activities and serving 2760 users (25% of 13-19 year olds in the area). The centre may be supplemented with detached or mobile provision at a later date. For this, new build costs are expected to be £2,156 per sq m. This equates to spending £1156 per person. Thus:

A new build with start up staffing costs:

$£1156 + £444 = £1600$ per user.

New development will not always justify the construction of new buildings. Spending might equally be used for equipment, improvements/modifications to the property and/or an increase in the number of sessions. In consideration of this, the range of figures (for staff set up and build costs as set out above) has been averaged as follows:-`

$((£1600 + £444)/2)*25\% = £256$ per potential user at PUBSEC 175 prices.

This figure is converted into a cost per size and type of dwelling in the Toolkit.

Childcare

Setting up Children's Centres and Extended Schools is considered to be a priority for the County Council. They form an integral part of the national childcare strategy.

Methodology for Calculating the Charge

The charge outlined in the Toolkit has combined the costs per child for Children's Centres and Extended Schools and converted the total figure into a cost per size and type of dwelling. The breakdown of this cost is outlined below. Contributions towards childcare facilities will normally be based on the unit costs related to the number and age category of children expected to live within the proposed development.

The County Council will have a duty under the Childcare Act to provide a childcare place to every child seeking one from spring 2008. It has found that circa 10% of the children in 0-5 age group take up childcare places in Children's Centres. In fact the number of children accessing places is greater than that but many only seek care on a part-time basis, which can lead to the 10% figure being misunderstood. The same applies for extended schools but it is expected that demand will expand more rapidly for this service, hence the target of 20%.

The assumptions made will be subject to review on a regular basis and as a result the figures may change.

Children's Centres

For 2006 to 2008 the County Council has a target to reach 38,674 children aged up to 5. The associated Capital Funding allocation is £9,371,350 for the build programme to construct 49 Children's Centres. The average allocation equates to £242 per child. An allocation of Revenue Funding of £7,761,791 has also been made over two years.

Start-up revenue funding for Childcare for the under 5's also makes available a maximum of £750 per place. The likely take up of childcare places for this age group is 10%. Therefore for every 100 children aged 0-4+, 10 childcare places will be required. This equates to £75 per child.

Total of £315 per child (0 to 4+).

Extended Schools

There are five main functions of Extended Schools (ES):

- Access to affordable, high quality childcare
- Activities, including study support, sports, arts activities, volunteering, special interest clubs, mentoring etc
- Swift and easy referral to specialist services e.g. speech and language therapy, behaviour support services etc
- Community access, including adult learning
- Parental support, including family learning

The County Council has run a pilot of 15 ES consortia, involving 136 schools and 5 Children's Centres, operating since September 2005. Finance has been made available to each consortium to fund an Extended Schools Consortium Coordinator (ESCO) whose brief has been to work across a consortium to develop access to the ES core offer, working with schools and other partners.

For 2006/08, the County Council has been allocated £3,000,000 Capital Funding for childcare in ES for 5-14 year olds to reach the 2008 target. By 2008 one half of primary schools (207, including first middle and primary schools) and one third of secondary schools (25) should be delivering extended services. Assuming a target population of 150,615 pupils, this equates to £20 per pupil.

A real example of a new scheme to provide childcare 8am - 6pm all year round is due to open at Windhill Primary School in Bishop's Stortford in 2006. The revenue start up costs for this are grant funded in the first year to a maximum of £750 per childcare place, providing three schools with before and after school care and holiday care. Childcare such as this usually serves approximately 10% of the children within a school. Thus an after-school club in a 400 place school would provide 40 places. However, with the local authority's duty to secure sufficient childcare this proportion must increase to approximately 20% in the near future. Therefore the same 400 place school would need to plan for 80 places. This equates to £150 per child. Total of £170 per child (5 to 14 years).

Example calculation (for illustrative purposes):

A new housing development of 10 x 3 bedroom houses produces an approximate yield of 3 children aged 0-4+ years and 5 children aged 5-14 years.

0-4+'s

Children's Centre Capital. $3 \times £242 = £726$

Start up revenue. $3 \times 10\% \times £750 = £225$

5-14's

Extended Schools Capital. $5 \times £20 = £100$

Start up revenue. $5 \times 20\% \times £750 = £750$

Total = £1,801 at PUBSEC 175 prices

End.

APPENDIX 2

HERTFORDSHIRE COUNTY COUNCIL

DRAFT SECTION 106 DEED OF AGREEMENT – DU []

PLEASE NOTE:-

- (A) THAT THE DISTRICT/BOROUGH COUNCIL MAY HAVE ITS OWN TEMPLATE AND THIS SHOULD BE ESTABLISHED BEFORE USING THIS MODEL DOCUMENT**
- (B) ALSO THE PROVISIONS OF THIS DOCUMENT MAY NEED TO BE AMENDED TO TAKE ACCOUNT OF MATTERS REQUIRED BY THE COUNTY COUNCIL/DISTRICT BOROUGH COUNCIL IN RELATION TO ANY SPECIFIC APPLICATION**

Date: 20[]

PARTIES:

1. HERTFORDSHIRE COUNTY COUNCIL of County Hall Hertford Hertfordshire SG13 8DE (“the County Council”)
2. BOROUGH/DISTRICT COUNCIL of
..... Hertfordshire (“the Council”)
3. (Co. Regn. No) whose
registered office is situate at (“the Owner”)
4. (Co. Regn. No) whose registered office is
situate at (“the Mortgagee”)
5. (Co. Regn. No) whose registered office is
situate at (“the Developer”)

NB. i) Owners of all interests in all affected parts of the Site will need to be parties as well as the Developer (if a different person)

- ii) **All mortgagees/lessees option holders etc. will also need to be parties**

- ii) **Title must be shown to all land within the Site and also over any land on which any highway works are to be carried out if not already part of the publicly maintained highway.**

WHEREAS

- (1) The County Council and the Council are local planning authorities for the purposes of the 1990 Act for the area in which the Site is situate and as such are the local planning authorities entitled to enforce the planning obligations hereinafter recited

- (2) The County Council is the Highway Authority the Education Authority the Library Authority the Social Services Authority and the Fire and Rescue Authority for Hertfordshire

- (3) The Owner is the freehold owner of the whole of the Site [subject to the Charge]

- (4) The Mortgagee has the benefit of the charge referred to in Recital (3)

- (5) The [Owner/Developer] has submitted the Planning Application to the Council

- (6) On [DATE] the Council resolved to grant the Planning Permission subject, among other things, to the prior completion of this Deed

- (7) This Deed is entered into to make provision for regulating the Development and securing the matters hereinafter referred to which are required in order to enable the Development to go ahead

NOW THIS DEED WITNESSETH as follows:

OPERATIVE PART

1. DEFINITIONS

1.1 In this Deed the following expressions shall have the following meanings:-

“the 1990 Act” means the Town and Country Planning Act 1990 (as amended);

“Charge” means the mortgage/charge dated [] made between the Owner (1) and the Mortgagee (2)

“Childcare Contribution” means the sum [of [] pounds (£[])] [calculated in accordance with Schedule 3A] (indexed linked as hereinafter provided) to provide childcare facilities serving the locality of the Development

“Commencement Date” means the date on which any material operation (as defined in Section 56(4) of the 1990 Act) forming part of the Development begins to be carried out other than (for the purposes of this Deed and no other purpose) operations consisting of site clearance, demolition work, archaeological investigations, investigations for the purpose of assessing ground conditions, remedial work in respect of any contamination or other adverse ground conditions, diversion and laying of services, erection of any temporary means of enclosure, the temporary display of site notices or advertisements and the expressions “Commence”, “Commences”, “Commencement” and “Commenced” shall be construed accordingly;

“Development” means the development of the Site with [*insert description of the development*] as set out in the Planning Application;

“Director of Environment” means the County Council’s Director of Environment for the time being and his agents;

“Education Contribution” means the sum [of [] pounds (£[])] [calculated in accordance with Schedule 3A] (index linked as hereinafter provided) towards the cost of educational facilities serving the locality of the Development;

“Fire and Rescue Service” means that part of the County Council known as the Hertfordshire Fire and Rescue Service

“GTP Guidance” means the County Council’s document entitled ‘Developing a Green Travel Plan – A Guidance Note’ which can be found at <http://www.hertsdirect.org/envroads/roadstrans/transplan/hdc/greentravelplans/>

“Interest” means the rate from time to time prescribed [under the Land Compensation Act 1961];

“Library Contribution” means the sum [of [] pounds (£[])] [calculated in accordance with Schedule 3A] (index linked as hereinafter provided) towards the cost of additional library facilities serving the locality of the Development;

“Nursery Contribution” means the sum [of [] pounds (£[])] [calculated in accordance with Schedule 3A] (index linked as hereinafter provided) towards the cost of nursery facilities serving the Development

“Occupy” “Occupation” and “Occupied” means occupation for the purposes of the Planning Permission but not including occupation by personnel engaged in the construction fitting out or decoration or occupation for marketing or display or occupation in relation to security operations

“Plan” means the plan annexed to this Deed;

“Planning Application” means the application for [outline/full] planning permission dated [] bearing the Council’s reference number [];

“Planning Permission” means the permission to be granted by way of approval of the Planning Application or from any reserved matters submissions or resulting from any other planning application covering all or part of the Site for any of the uses comprised in the Planning Application whether granted by variation alteration

substitution addition or replacement PROVIDED THAT if any form of development within the Site which individually or in combination with any other permission for development would lead to levels of development exceeding those set out in the Planning Application that development shall be subject to additional planning obligations;

PUBSEC Index” means the Department of Trade and Industry Tender Price Index of Public Sector Non Housing Smoothed All-In Index;

“Section 278 Agreement” means a valid agreement executed as a deed and to be entered into with the County Council pursuant, inter alia, to Section 278 of the Highways Act 1980

“Site” means the freehold property situate at [] Hertfordshire registered at the Land Registry with Title Absolute under the Title Number [] all of which land is shown for identification purposes only edged red on the Plan

“SPONS Index” means the index linked by reference to the price adjustment formula for construction contracts in the monthly bulletin of indices published by Her Majesty’s Stationary Office as collaged into a single index known as the SPONS Construction Civil Engineering Cost Index;

“Sustainable Transport Contribution” means the sum [of [] pounds (£[])] [calculated in accordance with Schedule 3B] (indexed linked as hereinafter provided) as a contribution towards [*specify reasons for contribution e.g. the design and construction of highway improvement works traffic management schemes traffic studies improvements to public transport or such other measures as will encourage users of the Development to travel to and from the Development by means of transport other than the private car which the Director in his absolute discretion determines will contribute to the improvement of highway conditions on parts of the network affected by traffic associated with the Development*];

“Water Scheme” means either the proposal prepared by or approved by the water undertaker for the area pursuant to the Water Industry Act 1991 to provide mains water services for the Development whether by means of new mains or extension to or diversion of existing services or apparatus OR where existing water services are to be used it shall mean the details of the residential dwellings and the water supply to them which shall be provided by the Owner for the written approval of the Fire and Rescue Service prior to commencement of the construction of any residential dwelling to be constructed as part of the Development

“Works” shall mean the works to the highway shown in principle only on drawing numbered [] annexed to this Deed (subject as mentioned in clause 11 hereof) which works shall for the avoidance of doubt include [] together with such ancillary works as may be required by the Director of Environment to facilitate the Development which ancillary works may without prejudice to the generality of the foregoing include the provision of street lighting traffic signs carriageway markings footways street furniture and drainage and any necessary alterations to statutory undertakers’ equipment

“Working Day” means any day other than a Saturday or a Sunday or a Public Holiday;

“Youth Contribution” means the sum [of [] pounds (£[])] [calculated in accordance with Schedule 3A] (index linked as hereinafter provided) towards the cost of [additional] facilities for young people within the locality of the Development;

1.2 In this Deed:-

1.2.1 the clause headings do not affect its interpretation;

- 1.2.2 words of the masculine gender shall incorporate the feminine and neuter genders and words of the singular shall include the plural and vice versa;
- 1.2.3 the reference to any statute or section of a statute includes any modification extension or re-enactment of that Act for the time being in force and shall include all instruments orders plans regulations permissions and directions for the time being made issued or given under that Act or deriving validity from it;
- 1.2.4 any reference to a clause, a paragraph or a schedule is unless the context otherwise requires a reference to a clause, a paragraph or a schedule of this Deed and any reference to a sub clause is a reference to a sub clause of the clause in which the reference appears;
- 1.2.5 references to the Site include any part of it;
- 1.2.6 where two or more people form a party to this Deed the obligations they undertake may be enforced against them all jointly or against each of them individually;
- 1.2.7 references to any party to this Deed shall include the successors in title to that party and to any person deriving title through or under that party and in the case of the Council and the County Council the successors to their respective functions;
- 1.2.8 any covenant by the Owner not to do any act of thing includes a covenant not to permit or allow the doing of that act or thing and words denoting an obligation on the Owner to do any act matter or thing include an obligation to procure that it be done;
- [1.2.9 references in this Deed to "development" shall have the meaning given by Section 55 of the 1990 Act]**

EFFECT OF THIS DEED

- 2.1. This Deed is entered into pursuant to Section 106 of the 1990 Act. To the extent that they fall within the terms of Section 106 of the 1990 Act the obligations contained in this Deed are planning obligations for the purposes of Section 106 of the 1990 Act and are enforceable by the Council and the County Council;
- 2.2 To the extent that any of the obligations contained in this Deed are not planning obligations within the meaning of the 1990 Act, they are entered into pursuant to the powers contained in Section 111 Local Government Act 1972, Section 2 Local Government Act 2000 and all other enabling powers;
- 2.3 The Owner enters into the obligations for itself and its successors in title with the Council and the County Council to the intent that the obligations hereunder shall be enforceable not only against the Owner but also against the successors in title of the Owner and any person claiming through or under the Owner an interest or estate in the Site or any part thereof

CONDITIONALITY

3. This Deed is conditional upon:-

- (i) the grant of the Planning Permission; and
- (ii) the Commencement of Development

save for the provisions of Clauses [*[i.e. payment of costs, delivery and jurisdiction interpretation clauses and anything else that is relevant]*] which shall come into effect immediately upon completion of this Deed

OWNER'S COVENANTS

4.1 The Owner covenants with the County Council:-

- (i) to observe and perform the covenants restrictions stipulations and obligations contained in Schedule 1 hereto
- (ii) to give the County Council and the Council no less than five (5) Working Days notice of the Commencement Date such notice to be given prior to the Commencement Date in writing using the proforma set out in Schedule 2 hereto
- (iii) to give the County Council and the Council no less than five (5) Working Days notice of the Occupation of the Development/
Completion of the Development such notice to be in writing using the proforma set out in Schedule 2 hereto
- (iv) upon completion of this Deed pay to the Council and the County Council their costs in connection with the preparation negotiation and completion of this Deed

COUNTY COUNCIL'S COVENANTS

- 5.1 The County Council hereby covenants with the Owner to use all sums received from the Owner under the terms of this Deed for the purpose(s) specified in this Deed for which they are paid
- 5.2 The County Council further covenants with the Owner that it will pay to the Owner a sum, equal to the amount of any payment made by the Owner to the County Council under this Deed which has not been expended in accordance with the provisions of this Deed within ten (10) years of the date of receipt by the Council of such payment together with Interest on such unexpended sum from the date of receipt to the date of payment

EXPENDITURE IN ADVANCE OF RECEIPT OF CONTRIBUTIONS

- 6. If prior to the receipt of any of [the Education Contribution the Libraries Contribution the Youth Contribution the Nursery Contribution or the Childcare Contribution] the County Council incurs any expenditure in providing additional [education libraries youth nursery

and childcare facilities as the case may be] the need for which arises from or in anticipation of the Development then the County Council may immediately following receipt of [the Education Contribution the Libraries Contribution the Youth Contribution the Nursery Contribution or the Childcare Contribution as the case may be deduct from the Education Contribution the Libraries Contribution the Youth Contribution the Nursery Contribution or the Childcare Contribution] as appropriate such expenditure incurred

INDEXATION

7.1 [The Library Contribution, the Childcare Contribution the Youth Contribution the Nursery Contribution and the Education Contribution] shall [each] be index linked by reference to the PUBSEC Index figure of [x] to the figure applicable to the quarter in which the contribution is paid

7.2 Where any sum is required to be index linked by reference to the PUBSEC Index that sum payable shall be increased or decreased in accordance with any change in the Department of Trade and Industry Tender Price Index of Public Sector Non-Housing (PUBSEC) Smoothed All-in Index by the application of the formula $A = B \times (C \div D)$ where:-

A is the total amount to be paid;

B is the principal sum stated in this deed;

C is the PUBSEC Smoothed All-in Index for the date upon which the interim payment described below is actually paid and;

D is the figure of [x – is figure specified in clause 7.1]

7.3 The Sustainable Transport Contribution shall be index-linked to movements in the SPONS Index from to the date on which the Sustainable Transport Contribution is paid

7.4 Where any sum to be paid to the County Council under the terms of this Deed is required to be indexed then an interim payment shall initially be made based on the latest available forecast figure (or figures as the case may be) at the date of payment and any

payment or payments by way of adjustment shall be made within ten (10) Working Days of written demand by the County Council or the payer of the interim payment (as the case may be) once the relevant indices have been finalised

MISCELLANEOUS

- 8.1 The Owner hereby warrants that it is the owner of the freehold of the Site and that no other party has an interest in the Site save as disclosed in writing to the County Secretary of the County Council prior to completion of this Deed
- 8.2. This Deed shall be registered as a local land charge by the Council
- 8.3. Notwithstanding the provisions of the Contracts (Rights of Third Parties) Act 1999 nothing in this Deed confers or purports to confer any right to enforce any of the terms and provisions herein on any person who is not a party hereto or a successor in title or a statutory successor to a party hereto
- 8.4. Any notice to the parties hereto under this Deed shall be deemed to be sufficiently served if delivered personally or sent by recorded delivery service to the following officials/persons at the respective addresses hereinafter specified:

In respect of the
Owner :

In respect of the
Council:

In respect of the
County Council:

The County
Secretary,
Hertfordshire
County Council,
County Hall,
Pegs Lane,
Hertford,
Herts
SG13 8DE

(ref : DU [])

Save that notices pursuant to paragraph 4 of Schedule 1 (Fire Hydrants) shall be sent to the person mentioned in paragraph 4.5 of Schedule 1

- 8.5 Insofar as any clause or clauses of this Deed are found (for whatever reason) to be invalid illegal or unenforceable then such invalidity illegality or unenforceability shall not affect the validity or enforceability of the remaining provision of this Deed.
- 8.6 Nothing in this Deed shall be construed as imposing a contractual obligation upon the Council as to the issue of the Planning Permission or as restricting the exercise by the Council or the County Council of any powers exercisable by them respectively under the 1990 Act or under any other Act or authority
- 8.7 No waiver whether express or implied by the County Council or Council of any breach or default by the Owner in performing or observing any of the obligations contained herein shall constitute a continuing waiver and no such waiver shall prevent the County Council or the Council from enforcing the relevant obligations or from acting upon any subsequent breach or default
- 8.8 This Deed shall cease to have any effect (insofar only as it has not been complied with) if the Planning Permission shall be quashed revoked or otherwise withdrawn or if the Commencement Date has not been initiated in accordance with section 56 of the 1990 Act before the expiration of the period specified in the Planning Permission
- 8.9 Where the approval, consent, expression of satisfaction, agreement, confirmation or certification of the Council or County Council or any officer of the Council or County Council is required for any purpose under or in connection with the terms of this Deed such approval, consent, expression of satisfaction, agreement, confirmation, or certification shall not be unreasonably withheld or delayed
- 8.10 Without prejudice to the Council's and the County Council's statutory rights the Owner hereby grants to the Council and/or the County Council or any person duly authorised or instructed by it an irrevocable licence at all reasonable times to enter the such parts of the Site to inspect any of the works to be carried out for the purposes of the Development and any materials to be used in carrying out those works for any purpose directly or indirectly connected with or contemplated by this Deed.

VALUE ADDED TAX

9. All consideration given in accordance with the terms of this Deed shall be exclusive of any valued added tax properly payable

JURISDICTION

10. This Deed is governed by and interpreted in accordance with the law of England and Wales

WORKS

11. If the Department for Transport Technical Design Standards or Advice is amended after the date of this Deed the Director of Environment shall be at liberty to review the Works and require any amendments he deems necessary to ensure that the Works comply with the revised standards and advice SAVE THAT in circumstances where detailed contract drawings have been approved in writing by the Director of Environment and the Works are commenced within three months of the date of the written approval then the Director of Environment shall not seek any amendments to the Works

MORTGAGEE'S CONSENT

12. The Mortgagee hereby consents to the Owner entering into this Deed and agrees that the security of the Charge over the Site shall take effect subject to this Deed PROVIDED THAT the Mortgagee shall otherwise have no liability under this Deed unless it takes possession of the Site in which case it too will be bound by the obligations as if it were a person deriving title from the Owner

IN WITNESS whereof the parties hereto have executed this Deed but the same remains undelivered until the day and year first before written

SCHEDULE 1

The Owners Covenants stipulations and Obligations

Sustainable Transport Contribution

- 1.1 To pay the Sustainable Transport Contribution to the County Council prior to the Commencement Date
- 1.2 Not to Commence the Development until the Sustainable Transport Contribution has been paid in accordance with paragraph 1.1 of this Schedule

Green Travel Plan

- 2.1 Not to occupy or permit the Site or any part of the Site to be occupied for purposes pursuant to the Planning Permission until it has prepared and secured the written approval (which shall not be unreasonably withheld) of the County Council to a Green Travel Plan (GTP) in respect of the part or parts to be occupied and each such GTP shall contain as many of the provisions detailed in the GTP Guidance as are appropriate to the Site or the relevant part of the Site and further shall include provisions as to how the progress of the GTP shall be monitored
- 2.2 That if it or its successors in title occupy the Site or any part of the Site pursuant to the Development it or they will implement the approved GTP relating to the Site or that part of the Site and shall use all reasonable endeavours to achieve the targets set therein
- 2.3 That it will in relation to the Site include in any tenant's lease or occupier's licence of any part or parts of the Site a covenant that the tenant or occupier will implement the GTP for such part or parts of the Site once it has been approved by the County Council and further that it will use all reasonable endeavours to enforce such obligation against any such tenant or occupier
- 2.4 Within twenty (20) Working Days of the letting of the Site or any part or parts thereof it will procure the delivery to the County Council of a notice giving the following details

- (i) the name and address of the tenant;
- (ii) a description of the premises demised;
- (iii) the length of the term; and
- (iv) a sufficient extract of the lease setting out the terms of the covenant expressed in favour of the County Council in relation to the GTP

Libraries Contribution Youth Contribution Childcare Contribution Nursery Contribution and Education Contribution

- 3.1 To pay the [Libraries Contribution the Youth Contribution the Childcare Contribution the Nursery Contribution and the Education Contribution] to the County Council prior to the Commencement Date
- 3.2 Not to Commence the Development until the [Libraries Contribution the Youth Contribution the Childcare Contribution the Nursery Contribution and the Education Contribution] have been paid in accordance with paragraph 3.1 of this Schedule

Fire Hydrants

- 4.1 To ensure that the Water Scheme incorporates fire hydrants in accordance with BS 750 (1984) as reasonably and properly required by the Hertfordshire Fire and Rescue Service
- 4.2 To construct and provide at no cost to the Fire and Rescue Service or the County Council the fire hydrants reasonably and properly indicated in the Water Scheme and to advise the Service in writing of the date upon which each and every fire hydrant becomes operational
- 4.3 Once operational to maintain the fire hydrants in good condition and repair such that they are suitable at all times for use by the Fire and Rescue Service until they are adopted by the Fire and Rescue Service which adoption shall take place upon the issue of a Certificate of Satisfaction by the Chief Fire Officer the issue of which shall not be unreasonably delayed PROVIDED THAT such Certificate shall not be issued prior to the issue by the Director of Environment of any Certificate of Maintenance for the highways in which the fire hydrants are located
- 4.4 Not to Occupy nor cause nor permit Occupation of any building forming part of the Development until such time as it is served by an operational fire hydrant
- 4.5 To address any notice to be given to the Fire and Rescue Service to the Water Services Officer, Fire and Rescue Service, Old London Road Hertford SG13 7LD Telephone 01992 507521

Highway Works

5. Not to Occupy nor cause nor permit Occupation of any part of the Development (or not to Commence the Development) until such time as the Works have been completed by the Owner to the satisfaction of the County Council as evidenced by issue of a certificate of completion by the Director of Environment in respect of the Works in accordance with the Section 278 Agreement

SCHEDULE 2

PROFORMA

EVENT NOTIFICATION AND PAYMENT

PURSUANT TO SECTION 106 AGREEMENT/UNILATERAL UNDERTAKING

DATED

MADE BETWEEN

PLANNING PERMISSION REFERENCE.....

HCC DU REFERENCE

SITE ADDRESS

.....

.....

.....

SITE OWNER DETAILS

Name

Contact name

Address

.....

.....

Telephone nos.

Main

Mobile

Email

EVENTS BEING NOTIFIED

Commencement Date – date :.....

Occupation of Development (Number if relevant) – date:.....

Completion of Development – date:

COMPLIANCE WITH OBLIGATION(S)

Schedule **Paragraph**

Details of obligation and compliance

PAYMENT OF S106 CONTRIBUTIONS

Payment Type	Amount	Interim Indexation	Final Indexation	Total	Payable to
Example Education (primary)	X £	Y £	Z £	X+Y £	Herts County Council

Payment of S106 contributions can be made by BACS, CHAPS or cheque. In any event the form should be completed to ensure the payment is identified correctly and forward to:

- a) The County Secretary
Hertfordshire County Council
County Hall,
Pegs Lane
Hertford
Hertfordshire
SG13 8DE

(Ref : DU)

- b) To X District /Borough Council
Check address in deed.

ONLY USE THIS SCHEDULE IF OUTLINE PLANNING APPLICATION AND DWELLING DETAILS UNKNOWN

SCHEDULE 3

SCHEDULE 3A

Calculation of Libraries Contribution Youth Contribution Childcare Contribution Nursery Contribution and Education Contribution

This table is indicative only and would need to be reviewed in relation to specific applications

Hertfordshire County Council Services - Contributions Table and Calculator

Bedrooms*	1	2	3	4	5+	1	2	3
	HOUSES Market & other					FLATS Market & other		
Primary education	£231	£1,036	£2,469	£3,721	£4,692	£93	£816	£1,392
Secondary education	£263	£802	£2,561	£4,423	£5,662	£47	£444	£1,677
nursery education	£35	£175	£340	£459	£545	£32	£195	£270
Childcare	£14	£64	£138	£199	£244	£8	£57	£89
Youth facilities	£6	£16	£50	£82	£105	£3	£13	£41
Library facilities	£98	£147	£198	£241	£265	£77	£129	£164
Total	£647	£2,240	£5,756	£9,125	£11,513	£260	£1,654	£3,633
	HOUSES Social Rent					FLATS Social Rent		
Primary education	£247	£2,391	£3,860	£5,048	£5,673	£44	£1,167	£2,524
Secondary education	£62	£450	£1,676	£2,669	£2,405	£14	£261	£1,084
nursery education	£39	£453	£475	£503	£955	£9	£216	£313
Childcare	£12	£121	£188	£226	£277	£4	£65	£113
Youth facilities	£2	£8	£31	£51	£55	£1	£6	£21
Library facilities	£48	£91	£130	£156	£155	£38	£82	£107
Total	£410	£3,514	£6,360	£8,653	£9,520	£110	£1,797	£4,162

*uses an assumed relationship between bedrooms and habitable rooms

All figures are subject to indexation and will be indexed using the PUBSEC Index from the base of 175. (175 is the index for 4th Quarter 2006 (September 2007 publication))

Note: The above base costs and dates are regularly reviewed and will change/be updated over time.

SCHEDULE 3B

ONLY USE THIS SCHEDULE IF OUTLINE PLANNING APPLICATION AND DWELLING DETAILS UNKNOWN

Calculation of Sustainable Transport Contribution

Location	second strand charge per dwelling (£)			
	number of bedrooms			
	1	2	3	4+
Town centre zones 1&2	£375	£500	£750	£1000
Elsewhere zones 3&4	£625	£750	£1125	£1500

PLEASE REFER TO SECTION 11 OF PLANNING OBLIGATIONS GUIDANCE – TOOLKIT FOR HERTFORDSHIRE

The COMMON SEAL of)
HERTFORDSHIRE COUNTY)
COUNCIL was hereunto affixed)
in the presence of:-)

[The COMMON SEAL of)
)
was hereunto affixed to this)
Deed in the presence of:-)

The COMMON SEAL of)
)
was hereunto affixed to this)
Deed in the presence of:-)

The COMMON SEAL of)
)
was hereunto affixed to this)
Deed in the presence of:-)]

[Other forms of attestation]

Date _____ 20[]

HERTFORDSHIRE COUNTY COUNCIL

- and -

BOROUGH/DISTRICT COUNCIL

- and -

.....

-and-

.....

Deed of Agreement pursuant to S.106
Town and Country Planning Act 1990
(as amended) in relation to the
development of Site at
[.....]

ANDREW L LAYCOCK
County Secretary
County Hall
Hertford
SG13 8DE

REF: DU

end

APPENDIX 3

Unilateral Undertaking Model Precedent

PLEASE NOTE:-

- (A) THAT THE DISTRICT/BOROUGH COUNCIL MAY HAVE ITS OWN TEMPLATE AND THIS SHOULD BE ESTABLISHED BEFORE USING THIS MODEL DOCUMENT**
- (B) THE PROVISIONS OF THIS DOCUMENT MAY NEED TO BE AMENDED TO TAKE ACCOUNT OF MATTERS REQUIRED BY THE COUNTY COUNCIL/DISTRICT/BOROUGH COUNCIL IN RELATION TO A SPECIFIC APPLICATION**

THIS UNILATERAL UNDERTAKING is made by deed on the [] day of [] 20[]

PARTIES

- 1. (Co. Regn. No. []) whose registered office is situate at address is ("the Owner" (which expression shall include the Owner's successors in title)) and
- 2. (Co. Regn. No. []) whose registered office is situate at("the Mortgagee")

In favour of

- 3.District/ Borough Council of ("the Council"); and
- 4. Hertfordshire County Council of County Hall, Pegs Lane, Hertford, SG13 8DE ("the County Council")

hereinafter collectively referred to as "the Councils"

- NB. i) Owners of all interests in all affected parts of the Site will need to be parties as well as the Developer (if a different person)**
- ii) All mortgagees/lessees option holders etc. will also need to be parties**
- ii) Title must be shown to all land within the Site and also over any land on which any highway works are to be carried out if not already part of the publicly maintained highway.**

WHEREAS

- (1) The Council and the County Council are the local planning authorities for the purposes of the 1990 Act for the area within which the Site is situate and as such are the local planning authorities entitled to enforce the planning obligations hereinafter recited
- (2) The County Council is also the Highway Authority the Education Authority the Library Authority the Social Services Authority and the Fire and Rescue Authority for Hertfordshire
- (3) The Owner is the freehold owner of the whole of the Site [subject to the Charge]
- (4) The Mortgagee has the benefit of the charge referred to in Recital (3)
- (5) The Owner has submitted the Planning Application to the Council
- (6) This Deed is entered into to make provision for regulating the Development and securing the matters hereinafter referred to which are required in order to enable the Development to go ahead

NOW THIS DEED WITNESSES AS FOLLOWS

OPERATIVE PART

1. DEFINITIONS

1.1 In this Deed the following expressions shall have the following meanings:-

“the 1990 Act” means the Town and Country Planning Act 1990 (as amended);

“Charge” means the mortgage/charge dated [] made between the Owner (1) and the Mortgagee (2)

“Childcare Contribution” means the sum [of [] pounds (£[])] [calculated in accordance with Schedule 3A] (indexed linked as hereinafter provided) to provide childcare facilities serving the locality of the Development

“Commencement Date” means the date on which any material operation (as defined in Section 56(4) of the 1990 Act) forming part of the Development begins to be carried out other than (for the purposes of this Deed and no other purpose) operations consisting of site clearance, demolition work, archaeological investigations, investigations for the purpose of assessing ground conditions, remedial work in respect of any contamination or other adverse ground conditions, diversion and laying of services, erection of any temporary means of enclosure, the temporary display of site notices or advertisements and the expressions “Commence”, “Commences”, “Commencement” and “Commenced” shall be construed accordingly;

“Development” means the development of the Site with [*insert description of the development*] as set out in the Planning Application;

“Director of Environment” means the County Council’s Director of Environment for the time being and his agents;

“Education Contribution” means the sum [of [] pounds (£[])] [calculated in accordance with Schedule 3A] (index linked as hereinafter provided) towards the cost of educational facilities serving the locality of the Development;

“Fire and Rescue Service” means that part of the County Council known as the Hertfordshire Fire and Rescue Service

“GTP Guidance” means the County Council’s document entitled ‘Developing a Green Travel Plan – A Guidance Note’ which can be found at <http://www.hertsdirect.org/envroads/roadstrans/transplan/hdc/greentravelplans/>

“Interest” means the rate from time to time prescribed [under the Land Compensation Act 1961];

“Library Contribution” means the sum [of [] pounds (£[])] [calculated in accordance with Schedule 3A] (index linked as hereinafter provided) towards the cost of additional library facilities serving the locality of the Development;

“Nursery Contribution” means the sum [of [] pounds (£[])] [calculated in accordance with Schedule 3A] (index linked as hereinafter provided) towards the cost of nursery facilities serving the Development

“Occupy” “Occupation” and “Occupied” means occupation for the purposes of the Planning Permission but not including occupation by personnel engaged in the construction fitting out or decoration or occupation for marketing or display or occupation in relation to security operations

“Plan” means the plan annexed to this Deed;

“Planning Application” means the application for [outline] [full] planning permission dated [] bearing the Council’s reference number [];

“Planning Permission” means the permission to be granted by way of approval of the Planning Application or from any reserved matters submissions or resulting from any other planning application covering all or part of the Site for any of the uses comprised in the Planning Application whether granted by variation alteration substitution addition or replacement PROVIDED THAT if any form of development within the Site which individually or in combination with any other permission for development would lead to levels of development exceeding those set out in the Planning Application that development shall be subject to additional planning obligations;

“PUBSEC Index” means the Department of Trade and Industry Tender Price Index of Public Sector Non Housing Smoothed All-In Index;

“Section 278 Agreement” means a valid agreement executed as a deed and to be entered into with the County Council pursuant, inter alia, to Section 278 of the Highways Act 1980

“Site” means the freehold property situate at [] Hertfordshire registered at the Land Registry with Title Absolute under the Title Number [] all of which land is shown for identification purposes only edged red on the Plan

“SPONS Index” means the index linked by reference to the price adjustment formula for construction contracts in the monthly bulletin of indices published by Her Majesty’s Stationary Office as collaged into a single index known as the SPONS Construction Civil Engineering Cost Index;

“Sustainable Transport Contribution” means the sum [of [] pounds (£[])] [calculated in accordance with Schedule 3B] (indexed linked as hereinafter provided) as a contribution towards [*specify reasons for contribution e.g. the design and construction of highway improvement works traffic management schemes traffic studies improvements to public transport or such other measures as will encourage users of the Development to travel to and from the Development by means of transport other than the private car which the Director in his absolute discretion determines will contribute to the improvement of highway conditions on parts of the network affected by traffic associated with the Development*];

“Water Scheme” means either the proposal prepared by or approved by the water undertaker for the area pursuant to the Water Industry Act 1991 to provide mains water services for the Development whether by means of new mains or extension to or diversion of existing services or apparatus OR where existing water services are to be used it shall mean the details of the residential dwellings and the water supply to them which shall be provided by the Owner for the written approval of the Fire and Rescue Service prior to commencement of the construction

of any residential dwelling to be constructed as part of the Development

“Works” shall mean the works to the highway shown in principle only on drawing numbered [] annexed to this Deed (subject as mentioned in clause 11 hereof) which works shall for the avoidance of doubt include [] together with such ancillary works as may be required by the Director of Environment to facilitate the Development which ancillary works may without prejudice to the generality of the foregoing include the provision of street lighting traffic signs carriageway markings footways street furniture and drainage and any necessary alterations to statutory undertakers’ equipment

“Working Day” means any day other than a Saturday or a Sunday or a Public Holiday;

“Youth Contribution” means the sum [of [] pounds (£[]) [calculated in accordance with Schedule 3A] (index linked as hereinafter provided) towards the cost of [additional] facilities for young people within the locality of the Development;

1.2 In this Deed:-

1.2.1 the clause headings do not affect its interpretation;

1.2.2 words of the masculine gender shall incorporate the feminine and neuter genders and words of the singular shall include the plural and vice versa;

- 1.2.3 the reference to any statute or section of a statute includes any modification extension or re-enactment of that Act for the time being in force and shall include all instruments orders plans regulations permissions and directions for the time being made issued or given under that Act or deriving validity from it;
- 1.2.4 any reference to a clause, a paragraph or a schedule is unless the context otherwise requires a reference to a clause, a paragraph or a schedule of this Deed and any reference to a sub clause is a reference to a sub clause of the clause in which the reference appears;
- 1.2.5 references to the Site include any part of it;
- 1.2.6 where two or more people form a party to this Deed the obligations they undertake may be enforced against them all jointly or against each of them individually;
- 1.2.7 references to any party to this Deed shall include the successors in title to that party and to any person deriving title through or under that party and in the case of the Council and the County Council the successors to their respective functions;
- 1.2.8 any covenant by the Owner not to do any act of thing includes a covenant not to permit or allow the doing of that act or thing and words denoting an obligation on the Owner to do any act matter or thing include an obligation to procure that it be done;
- [1.2.9 references in this Deed to "development" shall have the meaning given by Section 55 of the 1990 Act]

EFFECT OF THIS DEED

- 2.1. This Deed is entered into pursuant to Section 106 of the 1990 Act. To the extent that they fall within the terms of Section 106 of the 1990 Act the obligations contained in this Deed are planning obligations for the purposes of Section 106 of the 1990 Act and are enforceable by the Council and the County Council;
- 2.2 To the extent that any of the obligations contained in this Deed are not planning obligations within the meaning of the 1990 Act, they are entered into pursuant to the powers contained in Section 111 Local Government Act 1972, Section 2 Local Government Act 2000 and all other enabling powers;
- 2.3 The Owner enters into the obligations for itself and its successors in title with the Council and the County Council to the intent that the obligations hereunder shall be enforceable not only against the Owner but also against the successors in title of the Owner and any person claiming through or under the Owner an interest or estate in the Site or any part thereof
3. The covenants in this Unilateral Undertaking shall come into effect on the date of this Unilateral Undertaking

OWNER'S COVENANTS

- 4.1 The Owner covenants with the County Council:-
 - (i) to observe and perform the covenants restrictions stipulations and obligations contained in Schedule 1 hereto

- (ii) to give the County Council and the Council no less than five (5) Working Days notice of the Commencement Date such notice to be given prior to the Commencement Date in writing using the proforma set out in Schedule 2 hereto
- (iii) to give the County Council and the Council no less than five (5) Working Days notice of the Occupation of the Development/ Completion of the Development such notice to be in writing using the proforma set out in Schedule 2 hereto
- (iv) upon completion of this Deed pay to the Council and the County Council their costs in connection with the preparation negotiation and completion of this Deed

4.2 The Owner further covenants that:-

- (i) it is the freehold owner of the Site
- (ii) the Site is free from all encumbrances material to this Unilateral Undertaking
- (iii) save the Mortgagee no other party has an interest in the Site

EXPENDITURE IN ADVANCE OF RECEIPT OF CONTRIBUTIONS

5. If prior to the receipt of any of [the Education Contribution the Libraries Contribution the Youth Contribution the Nursery Contribution or the Childcare Contribution] the County Council incurs any expenditure in providing additional [education libraries youth nursery and childcare facilities as the case may be] the need for which arises from or in anticipation of the Development then the County Council may immediately following receipt of [the Education Contribution the Libraries Contribution the Youth Contribution the Nursery Contribution

or the Childcare Contribution as the case may be deduct from the Education Contribution the Libraries Contribution the Youth Contribution the Nursery Contribution or the Childcare Contribution] as appropriate such expenditure incurred

INDEXATION

6.1 [The Library Contribution, the Childcare Contribution the Youth Contribution the Nursery Contribution and the Education Contribution] shall [each] be index linked by reference to the PUBSEC Index figure of [x] to the figure applicable to the quarter in which the contribution is paid

6.2 Where any sum is required to be index linked by reference to the PUBSEC Index that sum payable shall be increased or decreased in accordance with any change in the Department of Trade and Industry Tender Price Index of Public Sector Non-Housing (PUBSEC) Smoothed All-in Index by the application of the formula $A = B \times (C \div D)$ where:-

A is the total amount to be paid;

B is the principal sum stated in this deed;

C is the PUBSEC Smoothed All-in Index for the date upon which the interim payment described below is actually paid and;

D is the figure of [x – is figure specified in clause 6.1]

6.3 The Sustainable Transport Contribution shall be index-linked to movements in the SPONS Index from to the date on which the Sustainable Transport Contribution is paid

6.4 Where any sum to be paid to the County Council under the terms of this Deed is required to be indexed then an interim payment shall initially be made based on the latest available forecast figure (or figures as the case may be) at the date of payment and any payment or payments by way of adjustment shall be made within ten (10) Working

Days of written demand by the County Council or the payer of the interim payment (as the case may be) once the relevant indices have been finalised

MISCELLANEOUS

- 7.1 The Owner hereby warrants that it is the owner of the freehold of the Site and that no other party has an interest in the Site save as disclosed in writing to the County Secretary of the County Council prior to completion of this Deed
- 7.2 This Deed shall be registered as a local land charge by the Council
- 7.3 Notwithstanding the provisions of the Contracts (Rights of Third Parties) Act 1999 nothing in this Deed confers or purports to confer any right to enforce any of the terms and provisions herein on any person who is not a party hereto or a successor in title or a statutory successor to a party hereto
- 7.4 Any notice to the parties hereto under this Deed shall be deemed to be sufficiently served if delivered personally or sent by recorded delivery service to the following officials/persons at the respective addresses hereinafter specified:

In respect of the
Owner :

In respect of the
Council:

In respect of the
County Council:
The County
Secretary,
Hertfordshire
County Council,
County Hall,
Pegs Lane,
Hertford,
Herts
SG13 8DE
(ref : DU [])

Save that notices pursuant to paragraph 4 of Schedule 1 (Fire Hydrants) shall be sent to the person mentioned in paragraph 4.5 of Schedule 1

- 7.5 Insofar as any clause or clauses of this Deed are found (for whatever reason) to be invalid illegal or unenforceable then such invalidity illegality or unenforceability shall not affect the validity or enforceability of the remaining provision of this Deed.
- 7.6 Nothing in this Deed shall be construed as imposing a contractual obligation upon the Council as to the issue of the Planning Permission or as restricting the exercise by the Council or the County Council of any powers exercisable by them respectively under the 1990 Act or under any other Act or authority
- 7.7 No waiver whether express or implied by the County Council or Council of any breach or default by the Owner in performing or observing any of the obligations contained herein shall constitute a continuing waiver and no such waiver shall prevent the County Council or the Council from enforcing the relevant obligations or from acting upon any subsequent breach or default
- 7.8 This Deed shall cease to have any effect (insofar only as it has not been complied with) if the Planning Permission shall be quashed revoked or otherwise withdrawn or if the Commencement Date has not been initiated in accordance with section 56 of the 1990 Act before the expiration of the period specified in the Planning Permission
- 7.9 Where the approval, consent, expression of satisfaction, agreement, confirmation or certification of the Council or County Council or any officer of the Council or County Council is required for any purpose under or in connection with the terms of this Deed such approval, consent, expression of satisfaction, agreement, confirmation, or certification shall not be unreasonably withheld or delayed

7.10 Without prejudice to the Council's and the County Council's statutory rights the Owner hereby grants to the Council and/or the County Council or any person duly authorised or instructed by it an irrevocable licence at all reasonable times to enter the such parts of the Site to inspect any of the works to be carried out for the purposes of the Development and any materials to be used in carrying out those works for any purpose directly or indirectly connected with or contemplated by this Deed.

VALUE ADDED TAX

8. All consideration given in accordance with the terms of this Deed shall be exclusive of any valued added tax properly payable

JURISDICTION

9. This Deed is governed by and interpreted in accordance with the law of England and Wales

WORKS

10. If the Department for Transport Technical Design Standards or Advice is amended after the date of this Deed the Director of Environment shall be at liberty to review the Works and require any amendments he deems necessary to ensure that the Works comply with the revised standards and advice SAVE THAT in circumstances where detailed contract drawings have been approved in writing by the Director of Environment and the Works are commenced within three months of the date of the

written approval then the Director of Environment shall not seek any amendments to the Works

MORTGAGEES CONSENT

11. The Mortgagee hereby consents to the Owner entering into this Deed and agrees that the security of the Charge over the Site shall take effect subject to this Deed PROVIDED THAT the Mortgagee shall otherwise have no liability under this Deed unless it takes possession of the Site in which case it too will be bound by the obligations as if it were a person deriving title from the Owner

IN WITNESS whereof the Owner and the Mortgagee have executed this Deed but the same remains undelivered until the day and year first before written.

SCHEDULE 1

The Owner's Covenants Restrictions Stipulations and Obligations

Sustainable Transport Contribution

- 1.1 To pay the Sustainable Transport Contribution to the County Council prior to the Commencement Date
- 1.2 Not to Commence the Development until such time as the Sustainable Transport Contribution shall have been paid to the County Council in accordance with paragraph 1.1 of this Schedule

Green Travel Plan

- 2.1 Not to occupy or permit the Site or any part of the Site to be occupied for purposes pursuant to the Planning Permission until it has prepared and secured the written approval (which shall not be unreasonably withheld) of the County Council to a Green Travel Plan (GTP) in respect of the part or parts to be occupied and each such GTP shall contain as many of the provisions detailed in the GTP Guidance as are appropriate to the Site or the relevant part of the Site and further shall include provisions as to how the progress of the GTP shall be monitored
- 2.2 That if it or its successors in title occupy the Site or any part of the Site pursuant to the Development it or they will implement the approved GTP relating to the Site or that part of the Site and shall use all reasonable endeavours to achieve the targets set therein
- 2.3 That it will in relation to the Site include in any tenant's lease or occupier's licence of any part or parts of the Site a covenant that the tenant or occupier will implement the GTP for such part or parts of the Site once it has been approved by the County Council and further that it will use all reasonable endeavours to enforce such obligation against any such tenant or occupier

2.4 Within twenty (20) Working Days of the letting of the Site or any part or parts thereof it will procure the delivery to the County Council of a notice giving the following details

- (i) the name and address of the tenant;
- (ii) a description of the premises demised;
- (iii) the length of the term; and
- (iv) a sufficient extract of the lease setting out the terms of the covenant expressed in favour of the County Council in relation to the GTP

**Libraries Contribution Youth Contribution Childcare Contribution
Nursery Contribution and Education Contribution**

3.1 To pay the [Libraries Contribution the Youth Contribution the Childcare Contribution the Nursery Contribution and the Education Contribution] to the County Council prior to the Commencement Date

3.2 Not to Commence the Development until the [Libraries Contribution the Youth Contribution the Childcare Contribution the Nursery Contribution and the Education Contribution] have been paid in accordance with paragraph 3.1 of this Schedule

Fire Hydrants

4.1 To ensure that the Water Scheme incorporates fire hydrants in accordance with BS 750 (1984) as reasonably and properly required by the Hertfordshire Fire and Rescue Service

- 4.2 To construct and provide at no cost to the Fire and Rescue Service or the County Council the fire hydrants reasonably and properly indicated in the Water Scheme and to advise the Service in writing of the date upon which each and every fire hydrant becomes operational
- 4.3 Once operational to maintain the fire hydrants in good condition and repair such that they are suitable at all times for use by the Fire and Rescue Service until they are adopted by the Fire and Rescue Service which adoption shall take place upon the issue of a certificate of satisfaction by the Chief Fire Officer of the Service the issue of which shall not be unreasonably delayed PROVIDED THAT such certificate of satisfaction shall not be issued prior to the issue by the Director of the certificate of maintenance for the highways in which the fire hydrants are located
- 4.4 Not to occupy nor cause nor permit occupation of any building forming part of the Development until such time as it is served by an operational fire hydrant

Highway Works

- 5 Not to Occupy nor cause nor permit Occupation of any part of the Development until such time as the Works have been completed by the Owner to the satisfaction of the County Council as evidenced by issue of a certificate of completion by the Director of Environment in respect of the Works in accordance with the Section 278 Agreement

SCHEDULE 2

PROFORMA

EVENT NOTIFICATION AND PAYMENT

PURSUANT TO SECTION 106 AGREEMENT/UNILATERAL UNDERTAKING

DATED

MADE BETWEEN

PLANNING PERMISSION REFERENCE.....

HCC DU REFERENCE

SITE ADDRESS

SITE OWNER DETAILS

Name

Contact name

Address

Telephone nos.

Main

Mobile

Email

EVENTS BEING NOTIFIED

Commencement Date – date :.....

Occupation of Development (Number if relevant) – date:.....

Completion of Development – date:

COMPLIANCE WITH OBLIGATION(S)

Schedule **Paragraph**

Details of obligation and compliance

PAYMENT OF S106 CONTRIBUTIONS

Payment Type	Amount	Interim Indexation	Final Indexation	Total	Payable to
Example Education (primary)	X £	Y £	Z £	X+Y £	Herts County Council

Payment of S106 contributions can be made by BACS, CHAPS or cheque. In any event the form should be completed to ensure the payment is identified correctly and forward to:

a) The County Secretary
 Hertfordshire County Council
 County Hall,
 Pegs Lane
 Hertford
 Hertfordshire
 SG13 8DE

(Ref : DU [])

b) To District /Borough Council
 Check address in deed.

ONLY USE THIS SCHEDULE IF OUTLINE PLANNING APPLICATION AND DWELLING DETAILS UNKNOWN

SCHEDULE 3

SCHEDULE 3A

Calculation of Libraries Contribution Youth Contribution Childcare Contribution Nursery Contribution and Education Contribution

This table is indicative only and would need to be reviewed in relation to specific applications

Hertfordshire County Council Services - Contributions Table and Calculator

Bedrooms*	1	2	3	4	5+	1	2	3
	HOUSES Market & other					FLATS Market & other		
Primary education	£231	£1,036	£2,469	£3,721	£4,692	£93	£816	£1,392
Secondary education	£263	£802	£2,561	£4,423	£5,662	£47	£444	£1,677
nursery education	£35	£175	£340	£459	£545	£32	£195	£270
Childcare	£14	£64	£138	£199	£244	£8	£57	£89
Youth facilities	£6	£16	£50	£82	£105	£3	£13	£41
Library facilities	£98	£147	£198	£241	£265	£77	£129	£164
Total	£647	£2,240	£5,756	£9,125	£11,513	£260	£1,654	£3,633
	HOUSES Social Rent					FLATS Social Rent		
Primary education	£247	£2,391	£3,860	£5,048	£5,673	£44	£1,167	£2,524
Secondary education	£62	£450	£1,676	£2,669	£2,405	£14	£261	£1,084
nursery education	£39	£453	£475	£503	£955	£9	£216	£313
Childcare	£12	£121	£188	£226	£277	£4	£65	£113
Youth facilities	£2	£8	£31	£51	£55	£1	£6	£21
Library facilities	£48	£91	£130	£156	£155	£38	£82	£107
Total	£410	£3,514	£6,360	£8,653	£9,520	£110	£1,797	£4,162

*uses an assumed relationship between bedrooms and habitable rooms

All figures are subject to indexation and will be indexed using the PUBSEC Index from the base of 175. (175 is the index for 4th Quarter 2006 (September 2007 publication))

Note: The above base costs and dates are regularly reviewed and will change/be updated over time.

SCHEDULE 3B

ONLY USE THIS SCHEDULE IF OUTLINE PLANNING APPLICATION AND DWELLING DETAILS UNKNOWN

Calculation of Sustainable Transport Contribution

Location	second strand charge per dwelling (£)			
	number of bedrooms			
	1	2	3	4+
Town centre zones 1&2	£375	£500	£750	£1000
Elsewhere zones 3&4	£625	£750	£1125	£1500

PLEASE REFER TO SECTION 11 OF PLANNING OBLIGATIONS GUIDANCE – TOOLKIT FOR HERTFORDSHIRE

EXECUTED as a Deed)
XXXXXXXXXXXX)
LIMITED acting by two of its directors)
or by one its directors and)
its company secretary)

Director:

Name:-

Signature:-

Director:

Name:-

Signature:-

Company Secretary:-

Name:-

Signature:-

Executed as Deed by)
XXXXX Bank PLC)
acting by)
_____)

DATED

20[]

XXXXXXXXXXXXXXXXXXXXX LIMITED
(the Owner)

XXXXXXXXXXXXX PLC
(The Mortgagee)

IN FAVOUR OF [.....]
BOROUGH/DISTRICT COUNCIL
(the Council)

and

HERTFORDSHIRE COUNTY COUNCIL
(the County Council)

UNILATERAL UNDERTAKING

Pursuant to Section 106 Town and Country
Planning Act 1990
(as amended)
relating to
Land at xxxxxxxxxxxxxxxxxxxxxxxxx,
Hertfordshire

HCC Ref : DU []

end

APPENDIX 4

The County Council's approach on detailed matters relating to S106 Contributions/Obligations

1) Solicitor's undertaking for the County Council's costs

Where a S106 legal agreement/unilateral undertaking is deemed necessary, the County Council will require a solicitor's undertaking to be provided on behalf of the Planning Applicant to the effect that they will pay "the County Council's costs in the preparation and completion of the legal agreement, whether or not the matter proceeds to completion" before the legal officer commences any work on the agreement/undertaking. The agreement/undertaking will also include a clause to provide for the payment of the County Council's costs in its preparation. In all cases, an estimate of the final costs will be provided once a draft agreement/undertaking is circulated or received.

The costs include legal and officer costs which as at January 2008 are charged at the following hourly rates:-

- Legal Officer - £140 per hour
- All other officers - £75 per hour

These costs will be reviewed on an annual basis.

2) Proof of ownership of the development site

From the outset of any discussions regarding a proposed agreement/undertaking the Planning Applicant (or his/her solicitor) will need to provide the County Council's legal officer with up to date copies of the title for the development site. This is because planning obligations bind the land and the law requires all persons with an interest in the land to be a party to the agreement/undertaking.

In addition, prior to completion of an agreement/undertaking, the County Council's legal officer will carry out a final search with H.M. Land Registry to ensure that there have been no changes to the interests in the development site during the course of any negotiations.

3) "Walk away" provisions

In certain circumstances, the owner or Owner entering into a S106 agreement/undertaking will want to include a clause within the agreement/undertaking which allows the person with the burden of the obligation to "walk away" at a point in future when they dispose of (i.e. sell on or transfer) their interest in the site. The County Council has carried out an extensive risk assessment into the potential impacts of such a provision, for example, it may exclude and limit the persons against which the County Council could enforce any breach, and in some cases, exclude any person/s from enforcement action. In order to limit such risk, the County Council will allow these types of clauses in the following, limited circumstances: -

- They will not be accepted in respect of any disposal "in part" for example where a development site is sold/transferred in specific pieces;
- They will not be accepted where any financial contributions payable are to be by way of phased payment (unless in certain circumstances a bond is provided on completion of the agreement/undertaking to cover the full amount of any contribution payable and any such bond will need to include any successors in title)
- Mortgagees will only be included within any walkaway provision provided they are not a mortgagee in possession

- They will generally be accepted where financial contributions or obligations are required prior to any commencement of the development permitted by the planning permission.

The example clauses set out below are aimed to provide a general guide to the wording of such of clauses and their acceptability.

Acceptable “walkaway clauses”: -

- “No person shall be liable for any breach of the covenants restrictions or obligations contained in this Deed occurring after it has parted with all of its interest in the Land save that it shall remain liable for any such breach occurring before it parted with possession of such interest in the Land”
- “The Owner shall be liable for ensuring that the obligations hereunder are fulfilled and all restrictions are complied with until it has disposed of all of its interest in the Land”
- “No person shall be liable for a breach of covenant contained in this Deed after he shall have parted with all its interests in the Land but without prejudice to liability for any subsisting breach of covenant prior to parting with such interest”

Unacceptable “walkaway” clauses: -

- “No person shall be liable for any breach of the terms of this Deed occurring after parting with their interest in the site in respect of which such breach occurs but they will remain liable for any breaches of this Undertaking occurring before that date”
- No person shall be liable for a breach of covenant contained in this Deed after he shall have parted with all interests in the Land or in

the part in respect of which such breach occurs but without prejudice to liability for any subsisting breach of covenant prior to parting with such interest”

- “The Owner shall not be liable in respect of any of its obligations under this Deed after it shall have disposed of all its interest or interests in the Property or as the case may be the part of which a breach occurs but without prejudice to any antecedent breach of the said obligations on the part of the Owner”
- “The Owner and its successors in title shall not be liable for any breach of the covenants restrictions or obligations contained in this Agreement after that party has parted with its interest in the Application Site provided that liability will still remain for any breach occurring prior to the parting of any party’s interest in the Application Site”

4) Mediation/Arbitration Clauses

Generally, such provisions will only be necessary where there is a S106 obligation which requires further agreement at a later date. For example, the design and implementation of a green travel plan. In such circumstances, it may be appropriate to include a mediation clause such as: -

“The parties to this Deed and their successors in title will attempt in good faith to negotiate a settlement to any claim or dispute between them arising out of or in connection with this Deed and if the matter is not resolved by negotiation the parties shall refer the dispute to mediation in accordance with the Centre for Dispute Resolution procedures

Notwithstanding the provisions of clause [xx] above the parties to this Deed and their successors in title shall reserve all their respective rights in the event that no agreed resolution shall be reached in the mediation referred to in clause [xx] above and no party shall be deemed to be precluded from taking such interim formal steps as may be considered necessary to protect such party's position while the mediation or other procedure is pending or continuing.”

As the County Council has certain statutory functions to fulfil there may be a risk if, in the unlikely event, it was bound by an arbitration clause and subsequent arbitrator's decision, there is a risk of potential conflict between such a decision and its statutory duties. Therefore, in all cases where such provisions are necessary, the County Council will take the approach that a mediation clause is acceptable but an arbitration clause is not.

Such consideration are unlikely to be relevant where an agreement/undertaking only requires payments of financial contributions as the sums and terms for payment and expenditure will have been agreed in advance of the legal agreement being completed, therefore, no further agreement will be necessary at a later date.

5) Bonds & Guarantors

A Bond may sometimes be required. For example, where any S106 contributions are to be paid by way of phased payment. Or alternatively, for very large developments, when the date for payment of any contributions is at a later point in future such as on/prior to occupation. The form and size of the bond will be dependant on the contribution/s required for the development. Parent guarantors will not be accepted in lieu of a Bond in any circumstances because in the event of a breach, the County Council must be sure that any financial contributions are available immediately and this cannot be guaranteed by a parent guarantor.

6) Triggers for payments

Wherever possible, the County Council will seek the payment on any S106 contributions at the earliest possible trigger date i.e. prior to commencement of any development. Trigger dates later than commencement of any development carry additional risks for the County Council and these will be assessed and addressed by appropriate means in the legal agreement. Such means are already set out in sections 3 and 5 above. Later trigger dates will be considered on a case by case basis or in special circumstances and will tend to be more appropriate to larger developments .

7) Repayments of financial contributions

The inclusion of a repayment provision for any S106 contributions paid to the County Council will be limited to S106 agreements. A unilateral undertaking is a unilateral promise on the part of one party in favour of another, therefore, by its nature it cannot require reciprocal acts by a third party. The County Council will generally require a repayment period of ten years. This period will only be reduced in exceptional circumstances.

8) Indexation

Further to the information provided earlier on in this document, the following aims to assist in understanding the concept of indexation and how it is used by Hertfordshire County Council.

Indexation is a method of ensuring that monies negotiated maintain a real value from the date of calculation to the time when they are paid, by being protected against cost inflation. It is also a method used to measure changes of construction costs and prices. Currently, financial contributions are based upon either a base date or figure (a figure is

used if the index is prone to fluctuation as this gives certainty to all involved), which is reviewed from time to time. The base date/figure will be subject to indexation.

Indexation calculations are worked out in the following manner:-

$A = B \times C/D$ where

A is the total amount to be paid

B is the principal sum stated in the deed

C is the forecasted Index figure for the date upon which the payment is to be made *. (See note below regarding interim payment)

D is the base Index figure (or date) stated in the deed

Indices provide information on actual and forecasted figures. The forecasted figures are not finalised for approximately one year after publication, so the most recent actual figures are only available for the previous year. In view of the above, Hertfordshire Property prefer to calculate an interim sum * at the time of payment of the principal figure, followed by a final payment, one year later. This ensures that the Owner does not overpay (i.e. if the index drops), which would require the County Council to make payment back to the planning applicant. Officers will assist in the calculation of the indexation payments on request.

SPONS Indices

The SPONS Constructed Civil Engineering Cost Index has been the common method adopted by HCC to measure increased costs of Highways works over a period of time and forms an integral part of all section 106 agreements that require contributions from the Owners.

There are 10 current indices for general civil engineering work, including Labour and supervision in civil engineering, the provision and maintenance of plant and road vehicles and materials..

The indices are published in a monthly bulletin of indices by HMSO for the Department Of Trade and Industry, entitled “Price Adjustment Formulae for Construction Contracts”. Although the above indices are prepared and published in order to provide a common basis for calculating increased costs during the course of a contract, they also present a time series of cost indices for the main components of civil engineering work. They can therefore be used as the basis of an index for civil engineering work.

PUBSEC Indices

The PUBSEC indices are now used in relation to education, nursery, library, youth and childcare contributions, since this index is related to public sector construction. The Department for Business Enterprise and Regulatory Reform (BERR) (formerly DTI) Tender Price Index of Public Sector Non–Housing (PUBSEC) Smoothed All-in Index is available from the dedicated BERR portal on the BCIS online website (www.rics.org) from 1 January 2008.

9) Expenditure in advance of payments

Where S106 Contributions are payable towards education, libraries and/or youth and childcare facilities, the County Council will require that any expenditure for such matters arising from or in anticipation of the proposed development incurred before the relevant S106 Contribution has been paid, are deducted from such contributions when they are finally received.

Examples of standard clauses are set out in the model documents at Appendices 2 and 3. end

APPENDIX 5

Contact List

The Environment and Property Law Group

The Environment and Property Law Group will be responsible for S106 legal agreements. As at 1 January 2008 the Group is headed up by Kathryn Pettitt, Assistant County Secretary, supported by Tessa Lewis, Acting Senior Solicitor.

Legal agreements are generally allocated on a “quad” system to the following lawyers: -

Quad 1	Watford Hertsmere Three Rivers	Phillipa Tate and Brona Bell
Quad 2	St Albans Welwyn Hatfield Dacorum	Damian Ogbonnaya and Stephanie Stammers
Quad 3	North Herts Stevenage	Tessa Lewis Shirley Oragui
Quad 4	East Herts Broxborne	Shirley Oragui Daljit Kaur

Address:-

The County Secretary's,
Corporate Services Department
Hertfordshire County Council
County Hall, Pegs Lane, SG13 8DE

DX : 145781 HERTFORD 4

The Development Services Team

The Development Services Team within Hertfordshire Property is responsible for S106 agreements in relation to Education (including youth and childcare), Libraries, the Fire and Rescue Service and Adult Care Services. The team is lead by Jacqueline Nixon, Principal Planning Officer - tel 01992 588104. Contact may also be made with following team members :-

Denise Headland – Planning Obligations Support Officer - tel 01992 588137

Alexandra Stevens – Planning Obligations Officer - tel 01992 588132

Matthew Wood – Senior Planning Officer - tel 01992 588118

Andrea Gilmour - Senior Planning Officer -tel 01992 556477

Address :

Development Services,
Hertfordshire Property,
Hertfordshire County Council,
County Hall, Pegs Lane, SG13 8DE

Transportation Planning and Policy Unit

The Transportation Planning and Policy Unit is responsible for advice in relation to planning applications and highways matters. The team is lead by Dave Humby (Head) and assisted by Vetti Vettivelu, the Highways Development Control Service Manager. Contact with the following officers should be made on proposals:-

	District	Highways Development Control Contact
Quad 1	Watford Hertsmere Three Rivers	Nick Gough (01992 588431) Peter Oliver
Quad 2	St Albans Welwyn Hatfield Dacorum	James Dale (01992 556120) Rob Davies
Quad 3	North Herts Stevenage	Manjinder Sehmi (01992 556128) Roger Taylor
Quad 4	East Herts Broxbourne	Rob Jepson (01992 556167) Mark Cornell

Address –

Highways Development Control,
Transportation Planning and Policy Unit,
Hertfordshire county Council,
County Hall, Pegs Lane, Hertford, SG13 8DN

Others:

Minerals and Waste

Brian Owen - Tel 01992 556255

Waste Management

Ray Greenall – Tel 01992 556160

Archaeology

Andrew Instone – tel 01992 555241

On other issues, contact may be made through the County Council's general telephone numbers :

From area codes 01923 and 020 8

01923 471555

From all other areas in Hertfordshire

01438 737555

APPENDIX 6

List of Hertfordshire Local Planning Authorities

Local Authority	Website address	Telephone number
<u>Broxbourne Borough Council</u>	(Website address: www.broxbourne.gov.uk)	01992 785555
<u>Dacorum Borough Council</u>	(Website address: www.dacorum.gov.uk)	01442 228000
<u>East Herts District Council</u>	(Website address: www.eastherts.gov.uk)	01279 655261
<u>Hertsmere Borough Council</u>	(Website address: www.hertsmere.gov.uk)	020 8207 2277
<u>North Hertfordshire District Council</u>	(Website address: www.north-herts.gov.uk/)	01462 474000
<u>St Albans City and District Council</u>	(Website address: www.stalbans.gov.uk)	01727 866100

<u>Stevenage Borough Council</u>	(Website address: www.stevenage.gov.uk)	01438 242242
<u>Three Rivers District Council</u>	(Website address: www.threerivers.gov.uk)	01923 776611
<u>Watford Council</u>	(Website address: www.watford.gov.uk)	01923 226400
<u>Welwyn Hatfield Council</u>	(Website address: www.welhat.gov.uk)	<u>General Enquiry Number (9) 01707 357000</u>

end

Please note that by law this meeting can be filmed, audio-recorded, photographed or reported electronically by the use of social media by anyone attending. This does not apply to any part of the meeting that is held in private session. The Council will webcast the meeting.

Please ask for:
Alison Marston

31 August 2021

Dear Councillor

You are requested to attend a meeting of the WELWYN HATFIELD BOROUGH COUNCIL DEVELOPMENT MANAGEMENT COMMITTEE to be held on Thursday 9 September 2021 at 7.30 pm in the The Theatre (Screen 3) Campus West AL8 6BX

Yours faithfully



Corporate Director
Public Protection, Planning and Governance

A G E N D A P A R T 1

1. SUBSTITUTIONS

To note any substitution of Committee Members made in accordance with Council Procedure Rules.

2. APOLOGIES

3. MINUTES

To confirm as a correct record the Minutes of the meeting held on 12th August 2021 (previously circulated).

4. NOTIFICATION OF URGENT BUSINESS TO BE CONSIDERED UNDER ITEM 7 AND ANY ITEMS WITHDRAWN FROM THE AGENDA

5. DECLARATIONS OF INTEREST BY MEMBERS

To note declarations of Members' disclosable pecuniary interests, non-disclosable pecuniary interests and non-pecuniary interests in respect of items on the Agenda.

6. BIOPARK BROADWATER ROAD WELWYN GARDEN CITY AL7 3AX - 6/2020/3420/MAJ - DEMOLITION OF EXISTING BUILDINGS AND CONSTRUCTION OF 289 RESIDENTIAL UNITS (USE CLASS C3) AND COMMUNITY HUB (USE CLASS E/F.2), WITH PUBLIC REALM AND OPEN SPACE, LANDSCAPING, ACCESS, ASSOCIATED CAR AND CYCLE PARKING, REFUSE AND RECYCLING STORAGE AND SUPPORTING INFRASTRUCTURE (Pages 3 - 64)

Report of the Corporate Director (Public Protection, Planning and Governance).

7. SUCH OTHER BUSINESS AS, IN THE OPINION OF THE CHAIRMAN, IS OF SUFFICIENT URGENCY TO WARRANT IMMEDIATE CONSIDERATION

8. EXCLUSION OF PRESS AND PUBLIC

The Committee is asked to resolve:

That under Section 100(A)(2) and (4) of the Local Government Act 1972, the press and public be now excluded from the meeting for Item 9 on the grounds that it involves the likely disclosure of confidential or exempt information as defined in Section 100(A)(3) and Paragraphs 2 (Information likely to reveal the identity of an individual), and 6 (Statutory notice or order) of Part 1 of Schedule 12A of the said Act (as amended).

In resolving to exclude the public in respect of the exempt information, it is considered that the public interest in maintaining the exemption outweighs the public interest in disclosing the information.

PART II

9. ANY OTHER BUSINESS OF AN EXEMPT NATURE AT THE DISCRETION OF THE CHAIRMAN

<u>Circulation:</u>	Councillors	J.Boulton (Chairman)	J.Skoczylas
		B.Fitzsimon (Vice-Chairman)	P.Shah
		S.Elam	T.Travell
		C Juggins	R.Trigg
		N.Pace	S.Tunstall
		J.Ranshaw	J.Weston
		D.Richardson	

Corporate Management Team
Press and Public (except Part II Items)

If you require any further information about this Agenda please contact Alison Marston, Governance Service on 07824 126620 or email - democracy@welhat.gov.uk

Agenda Item 6

Part I

Main author: David Elmore

Executive Member: Councillor S. Boulton
Peartree

WELWYN HATFIELD BOROUGH COUNCIL
DEVELOPMENT MANAGEMENT COMMITTEE – 09 SEPTEMBER 2021
REPORT OF THE CORPORATE DIRECTOR (PUBLIC PROTECTION, PLANNING
AND GOVERNANCE)

6/2020/3420/MAJ

BIOPARK BROADWATER ROAD WELWYN GARDEN CITY AL7 3AX

DEMOLITION OF EXISTING BUILDINGS AND CONSTRUCTION OF 289
RESIDENTIAL UNITS (USE CLASS C3) AND COMMUNITY HUB (USE CLASS E/F.2),
WITH PUBLIC REALM AND OPEN SPACE, LANDSCAPING, ACCESS, ASSOCIATED
CAR AND CYCLE PARKING, REFUSE AND RECYCLING STORAGE AND
SUPPORTING INFRASTRUCTURE.

APPLICANT: HG Group

1 Site Description

- 1.1 The site is approximately 1.24 hectares in size and is located to the south east of Welwyn Garden City town centre and train station. The irregular shaped parcel of land comprises a large building and other ancillary buildings and was in use as a Research and Development complex (Class B1b).
- 1.2 The existing buildings on site include laboratories with 5 industrial storeys and 2 levels of basement. The 5 industrial storeys are combined with a 2 storey plant space on the roof, this gives a total building height of approximately 30.51 metres to the stair core roof on the roof top and 34.75 metres to the top of the chimney flues. Along the eastern boundary there are ancillary buildings such as outhouses and plant rooms. Vehicular access to the site is provided via BioPark Drive, a private road which joins Broadwater Road.

2 The Proposal

- 2.1 Planning permission is sought to demolish the former BioPark buildings and erect 6 apartment blocks (Blocks A&B, C&D, E and F) and 8 townhouses.
- 2.2 The scheme consists of 289 residential units and 112.4 square metres of community use in Class E/F2. 29 residential units (10%) will meet Part M4(3) standards for wheelchair users and all others will meet Part M4(2).
- 2.3 The proposed unit mix is 129 x 1-bed (44%); 126 x 2-bed (44%); 26 x 3-bed (9%); and 8 x 4-bed (3%). 29 units (10%) are proposed as affordable housing, with the tenure being 100% (29 units) shared ownership.
- 2.4 Blocks A and B are 6 to 9 storeys; Blocks C and D are 5 to 8 storeys; Block E is 4 to 7 storeys; and Block F is 2 to 4 storeys. The townhouses are 2 to 3 storeys and located at the most southern part of the site.

- 2.5 The proposed massing steps from 2 storeys to 9 storeys, from the south to the north of the site. The massing is focused towards the western edge of the site adjacent the railway line. The tallest element is located to the north of the site and is approximately 29.45 metres at the top of the roof parapet. This is approximately 1.06 metres below the existing main building's stair core roof and 5.3 metres below the maximum height of the chimney flues.
- 2.6 There is only one vehicular entrance to the site which is via the existing access road (BioPark Drive). The proposal includes improvements to BioPark Drive, including a 4.8m carriageway and 3.1m wide footpath/cycleway.
- 2.7 The proposal utilises and extends the existing basement for car parking provision for the flats. Each townhouse would have car parking provision within their respective curtilage. There would be a total of 197 parking spaces for the residential properties (168 standard and 29 disabled) and 22 visitor spaces. The community hub would have 6 associated parking spaces (5 standard and 1 disabled). Over 20% of spaces would have electric vehicle charging provision and there would be 1 car club bay with active electric vehicle charging.
- 2.8 Outdoor amenity space is provided in a number of different locations across the site. This includes a community lawn area, orchard hideaway, outdoor dining area with edible planting, amphitheatre feature with dual attenuation drainage basin use; three doorstep play spaces, communal roof terraces, formal play areas and green and brown roofs. In total 3,023sqm of public open space is proposed. Each residential unit also has access to public amenity space.

3 Reason for Committee Consideration

- 3.1 This application was called-in by Councillor Malcolm Cowan in January 2021 for the following reasons:
- The application appears to conflict with council policies and the Broadwater Road West SPD;
 - Erratic selection of neighbouring residents to notify;
 - Unfortunate precedents that might be set for nearby applications were this approved.
- 3.2 It is noted that while Malcom Cowan is no longer a Councillor, the current Councillors for this Ward have confirmed this call-in.
- 3.3 This application is also referred to Committee given the strategic importance of the development proposal.

4 Relevant Planning History

- 4.1 Secretary of State Screening Direction
Secretary of State case reference: PCU/EIASCRC1950/3263775
Decision: An Environmental Statement is not required.
Decision Date: 4/02/2021
- 4.2 Application Number: 6/2020/2354/EIA
Decision: EIA Required
Decision Date: 18/11/2020

Proposal: Request for a Screening Opinion to determine whether an Environmental Statement is required for a proposed redevelopment of BioPark, Broadwater Road, Welwyn Garden City, AL7 3AX

- 4.3 Pre-Application Number: 6/2020/2805/PA
Decision: Refused
Decision Date: 19/11/2020
Proposal: Erection of 289 residential units with associated private and communal amenity space, public open space, car and cycle parking and landscaping
- 4.4 Pre-Application Number: 6/2020/2378/PA
Decision: Refused
Decision Date: 16/09/2020
Proposal: Design workshop for the erection of 340 residential units with associated private and communal amenity space, public open space, car and cycle parking and landscaping
- 4.5 Pre-Application Number: 6/2020/1932/PA
Decision: Refused
Decision Date: 10/09/2020
Proposal: Erection of 297 residential units with associated private and communal amenity space, public open space, car and cycle parking and landscaping
- 4.6 Pre-Application Number: 6/2020/0804/PA
Decision: Refused
Decision Date: 01/07/2020
Proposal: Erection of 340 residential units with associated private and communal amenity space, public open space, car and cycle parking and landscaping
- 4.7 Application Number: 6/2017/1243/FULL
Decision: Granted
Decision Date: 11/08/2017
Proposal: Retention of 3 and erection of 1 further antenna on lift shaft roof of BioPark.
- 4.8 Application Number: N6/2010/0263/MA
Decision: Granted
Decision Date: 17/05/2010
Proposal: Erection of two storey building for employment (B1) use.
- 4.9 Application Number: N6/1995/0349/FP
Decision: Granted
Decision Date: 10/07/1995
Proposal: Extension above fourth floor level of building 30 to provide laboratories, services/plant room.

5 Relevant Planning Policy

- 5.1 National Planning Policy Framework 2021 (NPPF)
- 5.2 The Saved Welwyn Hatfield District Plan 2005 (District Plan)
- 5.3 Draft Local Plan Proposed Submission 2016 (Emerging Local Plan)

- 5.4 Supplementary Design Guidance 2005 (SDG)
- 5.5 Supplementary Planning Guidance, Parking Standards 2004 (SPG)
- 5.6 Interim Policy for Car Parking Standards and Garage Sizes 2014 (Interim Car Parking Policy)
- 5.7 Broadwater Road West Supplementary Planning Document 2008 (Broadwater Road West SPD)
- 5.8 National Design Guide

6 Site Designation

- 6.1 The site lies within the settlement Welwyn Garden City as designated in the Welwyn Hatfield District Plan 2005.

7 Representations Received

- 7.1 The application was advertised by means of a press notice, neighbour notification letters and site notices. In total 674 objections were received, 27 comments and 5 letter of support. All representations received are published in full on the Council's website and are summarised below:

Objections

- Pressure on local infrastructure capacity (including schools, medical etc.)
- Pressure on existing transport infrastructure
- Insufficient parking and existing parking pressures on nearby streets
- Not consistent with Broadwater Road West SPD – namely in terms of height
- Not in keeping with Garden City ethos/vision
- Out of character with area
- Heritage harm
- Insufficient affordable housing and lack of social housing
- Obtrusive impact on nearby dwellings, loss of natural light, overlooking and loss of privacy
- Development will exacerbate traffic issues
- Future residents would be subject to excessive noise
- Air pollution danger
- Size of houses not appropriate
- Market already saturated with flats
- Overdevelopment of plot
- Eyesore
- Too tall and dense
- Lack of green space
- Unacceptable housing mix
- Drainage and flood risk
- Fear of crime
- Loss of property values

Support

- Looks great and improvement relative to existing building on site
- Good location
- Uses brownfield land

8 Consultations Received

8.1 The Gardens Trust and Heritage Garden Trust – Objection summarised as follows:

- Height and massing would cause harm to the setting of the designated heritage assets;
- Redevelopment of the area will adversely affect the relatively low rise residential properties in the immediate vicinity;
- No objection to a modest residential scheme though regret that the industrial heritage of the town has not been valued as much as the residential heritage, both now and in the past.

8.2 The following have responded advising that they have no objections to the proposal in principal, subject to conditions or obligations being applied:

- Place Services Urban Design Officer
- WHBC Landscape Officer
- WHBC Public Health and Protection
- WHBC Parking Services
- HCC Growth Infrastructure
- HCC Minerals and Waste Team
- HCC Historic Environment Advisor
- HCC Public Health Department
- Natural England
- Herts & Middlesex Wildlife Trust
- National Health Service
- Network Rail Thames Water
- Affinity Water
- HCC Rights of Way
- Environment Agency
- Sport England
- Hertfordshire Constabulary
- Highways England
- Cadent Gas
- HFRS Fire Protection
- HCC Ecology

8.3 No response was received from the following consultees:

- Hertfordshire Building Control Limited
- HCC Adult Care Services
- Welwyn Garden City Chamber of Trade
- Joint Committee of the National Amenity Societies
- The Ramblers Association
- Govia Thameslinks Railway
- Welwyn Hatfield Access Group
- Herts Sports Partnership

9 Analysis

9.1 The main planning issues to be considered in the determination of this application are:

- 1. Background**
- 2. Principle of development**
- 3. Heritage**
- 4. Quality of design and impact on the character of the area**
- 5. Residential amenity**
- 6. Highways and parking**
- 7. Other considerations**
 - i) Housing mix**
 - ii) Ecology**
 - iii) Flood risk and sustainable drainage**
 - iv) Sustainability and renewable energy**
 - v) Contaminated land**
 - vi) Waste management**
 - vii) Archaeology**
 - viii) Environmental Impact Assessment**
 - ix) Permitted development rights**
- 8. Planning obligations**
- 9. The planning balance**

1. Background

9.2 Part of the application site is defined on the District Plan Proposals Map as part of the Mixed Use Development Site at Broadwater Road West, which is subject to Policy EMP3 of the District Plan. This is part of Welwyn Garden City Industrial Area (EA1) and, as such, is subject to the provision of Policy EMP2 of the District Plan.

9.3 Policy EMP2 of the District Plan states that in designated employment areas, proposals for uses other than Classes B1, B2 and B8 should generally be resisted and will only be permitted where it can be clearly demonstrated that the existing land or premises are no longer required to meet future employment requirements and business and community needs. The site is also defined under Policy EMP3 of the District Plan to fall within the mixed use development site Broadwater Road West, which states development shall also comply with a Development Brief to be approved by the Council as a supplementary planning document.

9.4 To guide the future development of the site, a Development Brief titled Broadwater Road West Supplementary Planning Document 2008 was prepared. The Broadwater Road West SPD outlines the Council's vision for the future development of the area and sets out a masterplan to guide and promote the comprehensive redevelopment of the site.

9.5 With regard to this application site, the Broadwater Road West SPD says:

“The BioPark buildings located in the south western corner of the site are occupied by the University of Hertfordshire and provide a unique facility for bioscience and health technologies. The SPD does not therefore propose the redevelopment of this part of the site as it recognises the economic development

potential of the facility for the town, which should be supported through the redevelopment of the rest of the land.

- 9.6 The plan period of the District Plan ended in 2011 but the District Plan remains the adopted Development Plan for the borough.
- 9.7 The Council has prepared a Draft Local Plan Proposed Submission 2016 (emerging Local Plan) to replace the District Plan. The emerging Local Plan was initially submitted to the Secretary of State in May 2017. Within this, the site falls under Policy SP 17 (Mixed use development site at Broadwater Road West), which states:

“The BioPark site will be retained in Class B1b use unless it can be demonstrated that it is no longer suitable for use as a research facility or it is reprovided elsewhere in Welwyn Hatfield.”

- 9.8 Despite this draft policy, in the Local Plan Proposed Alterations - Additional Sites document (January 2020), WHBC Officers’ recommended to Councillors that:

“The University of Hertfordshire has confirmed its intention to close the facility and the site has been marketed for sale... The building is understood to need modernisation at considerable costs to attract life science occupants. Marketing evidence submitted indicates limited interest in the site for specialist B class users.

On balance, it is considered that the specialist nature of the buildings and the investment requirement could make the site difficult to sell or let and the contribution the site could make to housing land supply outweighs the loss of employment land.” (Local Plan Proposed Alterations - Additional Sites, p.64)

- 9.9 The BioPark facility is now closed and the reasoning for that is discussed in paragraphs 9.26-9.30 of this report.
- 9.10 The application site (Pea102) was presented to full Council on the 23rd of November 2020, where Councillors voted for a 13,800 dwelling (690 per annum) Objectively Assessed Need figure and agreed to take forward the site selection strategy, including the allocation of 250 dwellings at the site.
- 9.11 The emerging Local Plan is currently the subject of examination by an independent Planning Inspector. As part of the process of producing the new Local Plan the Council assessed the housing need in the borough. Having regard to this, the Council determined that the site is required to help meet future growth needs and accordingly it is now included as a proposed housing allocation in the emerging Local Plan. The Council does not currently have a five year supply of deliverable housing sites, a position which the Local Plan seeks to remedy.
- 9.12 Whilst the new Local Plan has yet to be adopted and does not therefore form part of the development plan, it is appropriate that weight is given to it in the decision making process. Paragraph 48 of the NPPF sets out that local planning authorities may give weight to relevant policies in emerging plans according to:
- a) the stage of preparation of the emerging plan (the more advanced its preparation, the greater the weight that may be given);

- b) the extent to which there are unresolved objections to relevant policies (the less significant the unresolved objections, the greater the weight that may be given); and
- c) the degree of consistency of the relevant policies in the emerging plan to the Framework (the closer the policies in the emerging plan to the policies in the Framework, the greater the weight that may be given).

9.13 The emerging Local Plan is currently subject to examination and is therefore at an advanced stage of the plan making process. It is noted that the Inspector has indicated that he has soundness concerns about the plan in its present form. The Council has proposed additional housing sites, including this site, to meet the Council's Full Objectively Assessed Need (FOAN) which were under Examination in March 2021.

9.14 In July 2021, following the Stage 9 hearing sessions, the examining Inspector provided several reports, including reports on the FOAN and conclusions on the soundness of the sites he has examined. The Inspector identified that the housing requirement figures for the plan period 2016-36, should be increased to 15,200 dwellings (an average of 760 dwellings per annum). He also stated that the allocation of Pea102 was sound.

Housing Land Supply

9.15 The NPPF sets out in paragraph 74 that planning authorities should at all times be able to identify sites sufficient to provide a five year supply of housing land against their housing target. The National Planning Practice Guidance (NPPG) states that the 'number of homes required' for the calculation of the five year housing land supply is the housing requirement in Local Plans.

9.16 In January 2021, the Council produced the Annual Monitoring Report (AMR). Within this it stated that:

'...as the borough's new Local Plan is still under examination and the most recent adopted housing requirement figure is more than five years old, the minimum annual local housing need figure should be used. This is calculated using the Standard Methodology, which takes national household growth projections over a ten-year period as a baseline, then applies an affordability adjustment using the median workplace-based affordability ratio. Any increase is capped at 40% of the projected household growth.'

Policy guidance, released in February 2019, states that the 2014-based household projections should be used as the baseline for the standard method. Under this methodology the minimum local housing need figure for Welwyn Hatfield is 875 dwellings per annum.

Against the standard methodology the borough has a housing land supply of 2.58 years. Whilst the housing supply is below the national 5-year requirement, until the Draft Local Plan is adopted, the borough is unlikely to be able to meet this requirement.'

9.17 As the council cannot demonstrate a five year supply of deliverable housing sites, the presumption in favour of sustainable development, as set out in Paragraph 11 of the NPPF, is engaged. Paragraph 11(d) states that where the policies which are most important for determining the application are out-of-date permission should be granted unless:

- i. the application of policies in this Framework that protect areas or assets of particular importance provides a clear reason for refusing the development proposed; or*
- ii. any adverse impacts of doing so would significantly and demonstrably outweigh the benefits, when assessed against the policies in this Framework taken as a whole.*

9.18 The Government published the housing delivery test results on 19 January 2021. It confirmed that Welwyn Hatfield had built 1,450 homes in the period 2017/18-2019/20 against a target of 2,284. This equates to 63%. Because supply has fallen below 75%, the Council needs to apply the presumption in favour of sustainable development when determining planning applications, which means granting planning permission unless there are clear reasons for refusal.

9.19 The presumption in favour of sustainable development does not change the statutory status of the development plan which continues to be the starting point for consideration, however it is also necessary therefore to consider whether the proposal represents sustainable development and whether planning permission should be granted applying paragraph 11(d).

2. Principle of Development

9.20 The site lies within the settlement of Welwyn Garden City, where in accordance with Policy GBSP2 of the District Plan there is no objection in principle to development. Furthermore, Policy R1 of the District Plan states that development will be permitted where it can be demonstrated that the principles of sustainable development are satisfied and that they will accord with the objectives and policies of the District Plan.

9.21 These objectives are consistent with the NPPF which promotes and supports the development of under-utilised land and buildings (para.120) and the efficient use of land (para.124).

Employment

9.22 This area of land is defined on the District Plan Map as part of the Mixed Use Development Site at Broadwater Road West and as such, is subject to the provisions of Policy EMP3 of the District Plan. The site is located within Employment Area EA1 – Welwyn Garden City Industrial Area. It is identified as an opportunity area of planned regeneration for mixed use development comprising primarily employment, housing, leisure and rail-related uses. Development of the site shall be in accordance with the criteria in Policy EMP2 and other relevant policies of the Plan relating to the uses proposed. Development shall also comply with the Broadwater Road West SPD.

9.23 Policy EMP2 of the District Plan states that in designated employment areas, proposals for uses other than Classes B1, B2 and B8 should generally be resisted and will only be permitted where it can be clearly demonstrated that the existing land or premises are no longer required to meet future employment requirements and business and community needs.

9.24 Within the emerging Local Plan, Policy SP 17 states that the BioPark site will be retained in Class B1b use unless it can be demonstrated that it is no longer suitable for use as a research facility or it is re-provided elsewhere in Welwyn Hatfield. As the Examination of the emerging Local Plan has progressed, and in

recognition of the need to allocate additional housing development, the use for the site has shifted from employment uses towards residential (site Pea102).

- 9.25 Until the emerging Local Plan is adopted, limited weight can be afforded to Policy SP 17 and the allocation of this site for residential development. More weight should therefore be afforded to Policies EMP2 and EMP3 of the District Plan. These policies seek to retain the site as a Research and Development site (class B1b) unless it can be demonstrated that the site is not required to meet future employment requirements and business needs. All such proposals will also be required to satisfy criteria (i) to (v) of Policy EMP2 and other relevant policies of the Plan relating to the use proposed. In all cases, the proposed development must comply with the design policies contained in the Plan.
- 9.26 As the proposal would not be for a Class B1, B2 and B8 use, a Marketing Report undertaken by Savills has been submitted in support of the application. The same report was also submitted as part of the additional sites in the Local Plan Proposed Alterations - Additional Sites document (January 2020). Having reviewed the submitted Marketing Report and documentation submitted alongside the site's promotion in the emerging Local Plan, it is considered that the fundamental problem in letting the BioPark is its geographical location (due to the site's isolated location away from the University and other large scale life-sciences) and also the poor condition of the building. These factors have resulted in a continued lack of demand.
- 9.27 The BioPark facility is a specialist building of mixed laboratories, offices and ancillary space. It was secured from Roche Products Ltd by the University of Hertfordshire (UoH) in 2006 and in the same year the UoH injected substantial investment into the building. However, despite this initial outlay, the space no longer aligns with market expectations and the laboratory facilities are no longer in demand. Notwithstanding the investment made and continued active marketing in the life sciences sector and in the local market by the UoH, the facility has never been at full occupancy. The BioPark suffered a major setback in November 2018 when the largest tenant, Heptares, relocated to Granta Park near Cambridge. At that time, the building was only 44% occupied. Also, the remaining tenants had minimal relationship or dialogue with the academic community in Hatfield.
- 9.28 A marketing agent for BioPark has identified that life science companies require modern, fit-for purpose facilities which the BioPark does not provide. However, it is not a matter of upgrading the building as such an option is not viable financially and, even if it was, there is no guarantee that it would generate significant new demand due to the site's inappropriate location. It was commented that trying to let BioPark was a difficult task, likely to become more difficult in future.
- 9.29 Marketing evidence therefore submitted indicates limited interest in the site for specialist B class users. Due to operational issues in terms of the facility not being viable as a centre for innovation and employment in the bioscience sector or indeed for general employment, the UoH recently took the decision to close the facility.
- 9.30 Taking account of the above, it is considered that it has been clearly demonstrated that the existing land or premises are no longer required to meet future employment requirements and business and community needs.

- 9.31 The majority of the proposal would be in residential use, with an ancillary community use space for a gym/café (Class E/F.2) of up to 112.4 square metres. Criteria (v) of Policy EMP2 of the District Plan is therefore not relevant. The scale of employment from the proposal would not result in an unacceptable impact on the housing in the travel to work area, thus satisfying criteria (i) of Policy EMP2. With regard to the outstanding criteria under Policy EMP2, it is considered that these would be satisfied and have been assessed in this report under the relevant headings (highways and parking; and residential amenity). Subject to the proposed development complying with the design policies contained in the Plan, the proposal satisfies Policy EMP2 of the District Plan.

Residential Development

- 9.32 The proposal is mainly for residential development. As the site is not part of an allocated housing site within the District Plan, the development would be considered as windfall housing and therefore Policy H2 of the District Plan is relevant. As previously mentioned, the site is allocated in the emerging Local Plan for housing and at this stage limited weight is afforded to this.
- 9.33 The proposed development is considered to comply with the criteria of Policy H2 of the District Plan as it is a previously developed site, with various sustainable modes of transport (bus and rail) within walking distance from the site, along with town centre services and amenities. Planning obligations have been sought to offset the demand from this proposal upon existing infrastructure, thus ensuring that the infrastructure can accommodate the development. The development would also not undermine the delivery of allocated sites and there are no known physical or environmental constraints on the site. For these reasons the proposal is considered to satisfy Policy H2 of the District Plan.

3. Heritage

- 9.34 As required under Section 16(2), 66(1) and 72(1) of the Planning (Listed Buildings and Conservation Areas) Act 1990, special regard shall be had to the desirability of preserving listed buildings or their setting or any features of special architectural or historic interest which they possess, and special attention shall be paid to the desirability of preserving or enhancing the character or appearance of conservation areas.
- 9.35 Paragraph 199 of the NPPF states that when considering the impact of a proposed development upon the significance of a designated heritage asset, great weight should be given to the asset's conservation (and the more important the asset, the greater that weight should be). This is irrespective of whether any potential harm amounts to substantial harm, total loss or less than substantial harm to its significance.
- 9.36 Paragraph 200 states that any harm to, or loss of, significance of a designated heritage asset (from its alteration or destruction, or from development within its setting) should require clear and convincing justification.
- 9.37 Paragraph 202 of the NPPF states that where a development will lead to less than substantial harm to the significance of a designated heritage asset, this harm should be weighed against the public benefits of the proposal.
- 9.38 Policy R28 (Historic Parks and Gardens) states that development will not be permitted if it would lead to the loss of, or cause harm to, the historic character, appearance or setting of any part of a registered historic park or garden.

- 9.39 Policy SADM15 (Heritage) of the emerging Local Plan sets out that proposals should respect the setting of heritage assets in terms of design, scale, materials and impact on key views. It continues by stating that proposals that result in less than substantial harm to the significance of a designated heritage asset will also be refused unless the need for, and benefits of, the development in that location significantly outweigh that harm and the desirability of preserving the asset, and all feasible solutions to avoid and mitigate that harm have been fully implemented.
- 9.40 Policy SP15 (The Historic Environment of Welwyn Garden City) echoes this policy objective and says that development proposals should respond to the key historic character and significance of the Garden City.
- 9.41 Policy SP 9 (Place Making and High Quality Design) of the emerging Local Plan outlines that proposals for taller buildings should positively respond to matters within their design solutions, including the impact on historic assets.
- 9.42 The site is located to the east of the Welwyn Garden City Conservation Area (WGCA), to the west of the Grade II listed former Roche office building (list entry no: 1348142) and to the south east of the Grade II listed former Shredded Wheat factory (list entry no: 1101084).
- 9.43 Approximately 4km to the south of the site are Hatfield House (Grade I listed) and its associated parkland (Hatfield Park Registered Park and Garden, registered at Grade I) which also includes the Old Palace (Grade I listed) and, immediately to the west of Hatfield Park, St Etheldreda's Church (Grade I listed). Whilst these assets are at a distance from the site, due to the low rise buildings within Welwyn Garden City, tall buildings are likely to impact on views north from these assets.
- 9.44 The heritage assets affected by the proposal and identified within the Heritage Townscape Visual Impact Assessment (HTVIA) are the:
- Welwyn Garden City Conservation Area (WGCA);
 - Grade II listed former Roche office building (list entry no: 1348142);
 - Grade II listed former Shredded Wheat factory (list entry no: 1101084);
 - and
 - Grade I listed Hatfield House and its associated parkland (Hatfield Park Registered Park and Garden, registered at Grade I) which are located approximately 4km to the south of the site.

Grade I Hatfield House and its associated Registered Park and Garden

- 9.45 The proposal seeks to demolish the existing building and redevelop the site with six apartment blocks of varying heights (up to a maximum of nine storeys) and a row of two and three storey townhouses.
- 9.46 Following an initial consultation with Historic England and Place Services Historic Building Officer, a Heritage, Townscape and Visual Impact assessment Addendum was submitted. This document assessed the views from Hatfield House and the southern approach to the house from the grade I registered park and garden. The existing and proposed mass has been drawn on the photographs which assists in understanding the impact of the scheme upon the significance of these highly graded heritage assets. Both consultees were subsequently consulted to comment on the Addendum.

9.47 Historic England commented the following,

'The existing and proposed mass lines show that the proposed development would be slightly shorter in height but would be wider. Although it is appreciated that a wire diagram cannot show articulation within the mass, it is clear that the footprint of the development is larger.'

The existing development, with its white cladding is visible within the setting of Hatfield House and within the wider setting of the registered park and garden, indeed the avenue of trees leading from the north front of the house appears to lead the eye directly towards the site. The increased wider mass of the proposed development would creep taller built form towards this sightline and further erode the generally open character of the view along the avenue. This is noticeable from Figure 1 which is taken from the roof of the building. Although the document notes that this is not a currently accessible view for the public, it would have once been a view that was accessible to guests and formed a historic viewing point over the parkland. Impacts upon this view are therefore important to significance of the building.

Figure 3 shows the impact of the existing and proposed masses upon the designed views from the southern approach to the house, where the land gently rises and views over Hatfield House towards the industrial zone and Welwyn Garden City are possible. The wider building mass is appreciable from this angle and while individual buildings may not be possible to discern from this distance, the increased size of built form is visible and would have a direct impact upon longer range views from the Grade I listed building. The site sits between the central clock tower and the slightly raised end extension blocks where the roof is at its lowest. The protrusion over the historic roofline of the current Biopark building still allows a degree of open space to be appreciated on either side of it however, the proposed increase in mass of the new development would entirely fill this gap in the architectural form of the historic building with modern built environment thus having the effect of enclosing the historic building form and loss of a through view.

Historic England consider that the LVIA addendum has shown the increased building mass to be of concern to the setting and significance of the grade I listed building and, the designed views and vistas from the grade I registered park and garden at Hatfield Park. Figures 1 and 3 indicate that the site is within an important vista and to increase the visibility of it by increasing its size would make modern built form more dominant within the historic environment and detract from the significance of Hatfield House and park and garden. The proposal would not therefore be in accordance with paragraphs 193, 194 and 200 of the NPPF.

Historic England comment that careful consideration of the massing and materials could reduce the visibility of the site and therefore reduce the impact upon the heritage assets. Whilst the proposed massing would not be reduced, a condition is proposed to agree the materials. In doing so, this would improve the materiality of the mitigating some of the harm upon the heritage assets.

Historic England do not object in principle to the redevelopment of this Biopark site however, at present we still have concerns relating to the scheme and consider that the development would cause less than substantial harm, low in scale to the highly graded heritage assets. We therefore consider that it is for your local authority to carry out the planning balance as required by paragraph 196 of the NPPF.'

- 9.48 The Council also consulted Place Services, Senior Built Heritage Consultant. With regard to Hatfield House and Park, the Senior Built Heritage Consultant commented the following,

'Figures 1 to 4 within the HTVIA Addendum now support the written assessment included in the HTVIA. The wireline diagrams show that the existing and proposed buildings are visible in these viewpoints. The existing and proposed buildings form part of the wider views across the landscape towards and including the built form of the Garden City. The proposed buildings do not break the horizon line and are partially filtered by existing trees and vegetation. The amount of built form on the site will increase, however, the proposed buildings will be of a more appropriate colour (rather than bright white) and will not be higher than the existing building. Places Services Senior Built Heritage Consultant concluded that the HTVIA Addendum of a neutral impact is agreed.'

- 9.49 Having considered the experts advice above, there is disagreement between them that there would be harm to the heritage assets. One expert identifies less than significant harm and the other identifies a neutral impact.
- 9.50 In line with paragraph 202 of the NPPF and Policy SADM15 of the emerging Local Plan, where a development proposal will lead to less than substantial harm to the significance of a designated heritage asset, this harm should be weighed against the public benefits of the proposal including, where appropriate, securing its optimum viable use. This is discussed at the end of this report, once all heritage assets and planning matters have been assessed.

Grade II listed Former Roche Office

- 9.51 In regards to the impact upon the Roche building, Place Services Senior Built Heritage Consultant commented that the viewpoints, in particular figure 5, shows that the new development will not be an intrusive feature in the backdrop to the former Roche office building, preserving its prominence on the corner of Broadwater Road and Otto Road. It is therefore agreed that there will not be a harmful impact on the setting of the former Roche Building.

Grade II Former Shredded Wheat Silos

- 9.52 Place Services Senior Built Heritage Consultant commented that at nine storeys maximum height, and considering the scale of the existing building, the proposal is also considered acceptable in regard to maintaining the landmark qualities of the former Shredded Wheat factory and particularly its silos. The prominence of the silos at the heart of the Garden City's original industrial area would still be appreciated.

Welwyn Garden City Conservation Area (WGCA)

- 9.53 In terms of the impact upon the Welwyn Garden City CA, as advised by Place Services Senior Built Heritage Consultant, the CGI viewpoints (albeit with solid trees) and the two verified views demonstrate that the proposal will have a minimal impact on views towards the site from within the WGCA. The domestic scale, planned layout and unifying architectural style of the WGCA will be preserved and there is not considered to be a detrimental impact on its character or appearance. Where there are glimpsed views of the proposed buildings from the CA, the proposed design and materials are considered to be sympathetic as they reflect architectural elements of the Garden City.

Conclusion on heritage assets

- 9.54 To conclude, Historic England has identified that any harm would be from the impact of the development on the significance of the Grade 1 listed Hatfield House and registered Parks and Garden. On account of impact on the setting, the harm is 'less than substantial.

4. Quality of design and impact on the character of the area

- 9.55 District Plan Policies D1 and D2 aim to ensure a high quality of design and to ensure that development respects and relates to the character and context of the locality, maintaining and where possible enhancing the character of the existing area. These policies are expanded upon in the Council's SDG which requires the impact of a development to be assessed giving regard to the bulk, scale and design of the proposal and how it harmonises with the existing building and area.
- 9.56 These objectives are broadly consistent with the emerging Local Plan and the aims of the NPPF which considers that the creation of high quality buildings and places is fundamental to what the planning and development process should achieve.
- 9.57 The Broadwater Road West SPD considered that the site should be retained in its current use and, therefore, did not propose to redevelop the site. The masterplan in the SPD sought to enhance the setting and considered it to form a part of the employment offer for the wider strategic site. The design principles were therefore not necessarily applied directly to the application site. It is however noted that the site falls within the strategic development. Therefore, in order to ensure a cohesive development is achieved, the principles will be considered as part of this application.

Density

- 9.58 In terms of density, Policy H6 of the District Plan states that in central areas and areas with good accessibility by modes of transport other than the car, residential development will be expected to be close to or exceed 50 dwellings per hectare provided that the development will not have an adverse impact on the character of the surrounding area and can satisfy the design policies of the plan. The Broadwater Road West SPD states that density within the area shall be approximately 75 dwellings per hectare.
- 9.59 Policy SP9 of the emerging Local Plan recognises that proposals should be of an appropriate density and combine the efficient use of land with high quality design whilst respecting character and context. It continues by stating that higher densities are encouraged in accessible locations near transport hubs or town centres.
- 9.60 In this instance, the proposal is approximately 233dph and consequently the high density will only be acceptable subject to it not having an adverse impact on the character of the surrounding area and satisfying the design policies of the plan.
- 9.61 The sustainable location of the site is such that higher density development would be acceptable in principle in this location, and the provision of flats will also generally result in a higher density of development than when compared to houses. Indeed, the site has been allocated in the emerging Local Plan for 250 dwellings. This figure will inevitably involve a significant proportion of flats.

Furthermore an increased density will be required to ensure a variety and mix of uses and also the viability of the development. However, the main consideration in determining the acceptability of the density of the proposed development, will be in relation to the size, scale and design of the proposed development.

Height

9.62 The proposal includes heights ranging from 2 to 9 storeys. The tallest proposed building would be a maximum height of approximately 29.45m (9 residential storeys). The existing building on site is a maximum height of approximately 30.51m in height (approximately 10 residential storeys). The maximum height on the site would therefore be reduced through this proposal.

9.63 Paragraph 6.17 of the Broadwater Road West SPD states:

“Given the context of the listed buildings, it is generally considered that buildings on the site should not be more than 5 storeys in height. Furthermore, where new build development on the site is proposing development of 5 storeys (or more) the resulting scheme will be assessed with regards to both the contribution that such height could bring and any adverse impacts. In reviewing schemes that include development of 5 storeys (or more) the Council will consider the following criteria –

- *Relationship to context of the site and the wider area*
- *Effect on historic context of the site and the wider area*
- *Relationship to transport infrastructure*
- *Architectural quality of the building*
- *Design credibility of the building*
- *Sustainable design and construction*
- *Contribution to public space and facilities*
- *Effect on the local environment and amenity of those in the vicinity of the building*
- *Contribution to permeability*
- *Provision of a well designed environment including fitness for purpose.”*

9.64 It should also be noted that as the application site was not considered as part of the redevelopment of the wider strategic site and was intended to be retained in its current form, the Broadwater Road West SPD therefore anticipated that the existing building on the site, which has a maximum height of approximately 30.51m would be retained.

9.65 On behalf of the Local Planning Authority, a Principal Urban Designer from Place Services was appointed to review the proposal. With regard to height they commented that the proposal represents a positive approach to height, with the tallest element at 9 storeys (akin to Wheat Quarter) being located at the northern edge of the site furthest away from the more sensitive low density residential development to the south. Locating the height along the western boundary

closest to the railway line reduces its impact on the existing 4 storey residential blocks on the opposite side of the access road, and height has generally been stepped down from west to east to help ensure this. The most sensitive part of the site, currently shown as 2/3 storey townhouses, represents an appropriate transition to the suburban form of Welwyn Garden City to the south both in terms of height and density/typology of housing. The height of the buildings proposed therefore decreases towards the south of the wider Broadwater Road West Strategic site.

- 9.66 Further to the Principal Urban Designer's comments, it should be noted that consideration is given towards the extant permission of the Former Shredded Wheat site (6/2018/0181/MAJ). Within this permission the tallest building was 9 storeys to the north of the site and the most southern building block, closest to the BioPark site, was a maximum of 5 storeys and is currently being built out. The consented Shredded Wheat scheme therefore has a gradual stepping down in building heights to the buildings surrounding the Roche building. Whilst this scheme proposes 9 storeys, the current scenario includes a taller building on site. This proposal would not therefore introduce tall buildings on the site, but rather replace an existing taller building. Notwithstanding this, as advised by the Principal Urban Designer, the proposal introduces a gradual decline on this site to respond to existing surrounding properties, as required in the Broadwater Road West SPD.
- 9.67 The Principal Urban Designer also outlines that the proposal would alter what is currently a large, monolithic block on the skyline to one which is considerably more interesting through a series of heights with regular breaks between. The use of the mansard roofs with their angled roof forms will also help to reduce the perception of bulk and height through creating more of a slim-lined approach to the tops of the buildings.
- 9.68 The Principal Urban Designer concluded that the scheme now sits comfortably within its context, particularly in light of the extant planning permission for the Wheat Quarter to the immediate north. It is also their view that whilst being taller than the stated heights within the Broadwater Road West SPD, the development would conform with the overarching principles of this design guide.
- 9.69 At pre-application stage there was concern with regard to 9 storeys and the applicant was advised to demonstrate through the use of CGIs how the views of the existing building and proposed development differ. This was requested to demonstrate the impact upon the character and appearance of Welwyn Garden City.
- 9.70 The applicant has submitted indicative images within the Planning Statement (Figure 9; Figure 10; Figure 11) and page 67 of the Design and Access Statement, demonstrate the massing and height of the proposal in contrast with the existing building and wider context, including the approved Shredded Wheat scheme (6/2019/0171/MAJ). In addition to this, a table has also been included within the Planning Statement on page 45 and 46 to demonstrate how the scheme responds to the Broadwater Road West SPD Design Principles.
- 9.71 The indicative images show the existing massing in red with the proposed massing overlaid. The further information, from a design perspective, demonstrates that the proposal would be approximately 1 metre less than the existing building. The taller elements of the proposal are also set to the north-west of the site adjacent the railway line. The buildings reduce in height, towards

the south of the site, where townhouses are proposed adjacent existing 2/3 storey properties. The indicative images also demonstrate that, in contrast to the existing buildings on site, the built form would be broken up.

Design Quality and Materials

- 9.72 The Principal Urban Designer commented that the elevational treatment are of high quality and include distinctive elevations. The material palette for the apartment block and townhouse elevations are considered to be a positive response to the traditional materials used in Welwyn Garden City. The proposed mansard roofs (as a dominant architectural feature in the Garden City) are also positive and well-articulated, and it remains the view that this treatment will offer something unique and represents a high level of design aspiration and intent.
- 9.73 The use of terracotta tiles with a textured/riven finish are considered to be an appropriate detail, and provide a way of 'softening' the roofs whilst also being in-keeping with the existing mansard roof materials. These materials, amongst others, will be secured by planning condition to ensure a high quality design is achieved.
- 9.74 A rainwater good strategy was also provided with the application. The rainwater goods are proposed in colours to match the external openings, in order to accent and compliment the building form. A neat bronze box gutter trims the edge of the tiled mansard. These will be secured by planning condition.
- 9.75 The Principal Urban Designer did seek a variation of the mansard to Block E as it was considered the full height mansard may appear slightly contrived. Following further work by the applicant other examples were presented, however the Principal Urban Designer was happy with their original option.
- 9.76 As for the materials proposed for hard landscaping, it is considered that such materials contribute to defining key public and private spaces and provide articulation to the shared access routes. The materials selected have been informed by the function of each space providing longevity and quality to the hard landscapes and contributing to their character. For further details on location, refer to General Arrangement Plans BMD.20.044.DR.P101-P104.

Landscape, Amenity and Public Realm

- 9.77 Policy D4 of the District plan expects new development where appropriate to either create or enhance public areas and the public realm. Design of the public realm should also meet the requirements of Policy D8 on landscaping. Policy R17 of the District Plan seeks to protect existing trees, whilst Policy D8 of the District Plan requires landscaping to form an integral part of the overall design, and in this respect the high quality design required by Policy D1 of the District Plan would again be relevant. Landscaping is important in order to protect and enhance the existing character of the area and to reduce the visual and environmental impacts of the development.
- 9.78 Welwyn Garden City was designed with buildings set within an 'Arcadian' landscape context with accessible open space, mature trees, hedgerows and boulevards. The "Garden City" was seen as a combination of living in the country yet at the same time having industry close by.

- 9.79 Landscaping within the existing site is limited to trees along the boundaries. A survey of the trees on the site has been undertaken in accordance with BS:5837:2012 and is considered to be a fair appraisal of the trees. According to the report the proposal would retain most of the trees with the loss of one high quality tree and several lower quality trees. The loss of these trees would be mitigated through the proposed landscaping of the site. The tree protection methods set in the Arboricultural Method Statement (AMS) and Tree Protection Plan (TPP) are considered sufficient to retain the trees successfully through the development. A condition is recommended to ensure the AMS and TPP are adhered to fully.
- 9.80 The proposal includes the provision of sedum/green roofs, including PV panels, of all flat roof areas which are not accessible by residents. This is welcomed in the interest of environmental sustainability. The PV panels will be screened from views from pedestrian level as a result of enhanced height parapets to the mansard roofs, thus ensuring a high level of design is retained. The PV panels and sedum/green roofs will be secured via condition. Additional sustainable design features are detailed in section 7(iv) of this report.
- 9.81 The proposals also presents the opportunity to enhance connectivity within the Garden City and Broadwater Road West Opportunity Area by providing pedestrian and cycle routes to the north to the Wheat Quarter and to adjacent residential development to the east and south. While agreement would be required to provide such linked access through the Wheat Quarter, the layout of the scheme has been designed to facilitate this.
- 9.82 As for the proposed landscaping scheme, it seeks to replicate the Garden City ethos by creating a public realm that: Creates a strong sense of place; increases biodiversity and sustainability; provides connected and integrated routes; and provides social, recreational and edible spaces for the community. In order to achieve this, the entrance to the site will be improved, with the introduction of hedgerows and climbers, which would create a greener entrance and better sense of arrival. The scheme also proposes raised planters, edible landscapes surrounding outdoor seating, and an area for an orchard and communal roof gardens on the site.
- 9.83 Due to the existing site featuring little landscaping, there is stated to be an over 700% biodiversity net gain beyond the existing situation. The Principal Urban Design Officer considers this to be a triumph of the landscaping strategy of the site. The proposed landscaping scheme is therefore considered to enhance the soft landscaping on the site and create a more attractive and pleasing residential environment for future occupiers.
- 9.84 The proposal also includes a series of inter-connected communal gardens focused around landscaped areas. The communal gardens to the north and south of the site will introduce doorstep play, and a landscaped area in the centre of the site is identified for outdoor dining, which includes seating and edible planting and an attenuation basin with sculpted sides creating a small informal amphitheatre and communal lawn area. These areas of open space will be accessible for future occupiers and existing residents. The amount and use of the open space on the site is positive and is considered to create a public realm with a strong sense of place, which creates social, recreational and edible spaces for the future and existing community, which is supported.

- 9.85 In addition to the public open space, the proposal includes communal rooftop gardens, which will have seating and planting. Further to this, the scheme includes private amenity space (via balconies) for each residential unit. The Principal Urban Design advised that the approach to private amenity is strong, with a good use of private and communal terraces, full and semi recessed balconies and projecting balconies which help to add variety and rhythm to elevations and are appropriately located to deal with the prevailing conditions depending on which orientation the elevation is facing.
- 9.86 The Principal Urban Designer commented that the communal amenity is 27.4sqm per unit, which is above and beyond what would be considered reasonable when combined with each unit having private amenity in excess of 5sqm (in many cases considerably more). The Principal Urban Designer commented that in the conditions of working from home which is likely to be a continued theme into the future, where communal and private amenity spaces will need to work harder and then previously before, this is another triumph of the scheme. The approach to communal and private amenity, along with the treatment of the public realm is therefore considered to be a very strong element of this scheme.
- 9.87 Boundary treatments are used to define the public and private spaces. Where private ground floor terraces front on to public realm, railings with hedgerows are proposed creating a secure and semi-private space. Within the wider streetscene, ornamental and hedge planting provide a buffer between housing facades and shared surfaces. A 2.1m high timber fence with native hedge is also proposed along the allotment boundary for security and privacy to the rear of the proposed townhouses.
- 9.88 The proposal also includes street furniture such as freestanding benches, wall mounted benches, seating with tables, timber cube seating, sun beds, bins and cycle stands. The street furniture will complement the overall character and design of each space with a focus on contemporary design and a unified material palette. Subtle variations in form also enhance the character definition of the public realm and support the functions of individual areas (as shown on General Arrangement Plans BMD.20.044.DR.P101-P104). These will be secured via planning condition.
- 9.89 In conclusion it is considered that the proposed landscaping, amenity and public realm is of a high standard. If approved, additional detail, as outlined above, will be required for approval. This view is shared with WHBC Landscape Officer and Place Services Principal Urban Design Officer. The proposal therefore satisfies policies D1, D4, D8 and R17 of the District Plan.

Design Summary

- 9.90 Given the accessible nature of the site in relation to local bus services on Broadwater Road, the proximity of the mainline rail station and the Town Centre, it is considered that this site wholly appropriate for a mid-rise, higher density scheme. Therefore, the proposed density is not objected to.
- 9.91 The Principle Urban Designer states that this development achieves the high bar of expected design quality and will help to set the tone for future developments coming forward within this rapidly changing area of Welwyn Garden City, presenting a positive and truly distinctive uplift in design quality for the area.

9.92 The massing of the development is appropriate and would respect the evolving character of the area. The height of the proposal would also not be objected to subject to the amenity of those in the vicinity of the building being protected and effect on historic context of the wider area being deemed acceptable when applying paragraph 202 of the NPPF and the planning balance.

5. Residential amenity

9.93 The NPPF highlights in chapter 12 'achieving well-designed places' that planning decisions should ensure that developments provide a high standard of amenity for existing and future users.

9.94 The Council's SDG outlines that development should not cause loss of light or be unduly dominant from adjoining properties. New units should also minimise overlooking and communal amenity area should be functional and useable. A similar approach to amenity and design is outlined in Policy SADM 11 of the emerging Local Plan.

9.95 Policies R19 of the District Plan explains that proposals will be refused if it is likely to be affected by unacceptable noise or vibration from other land uses. Conditions are supported to mitigate such impact. This approach is consistent with Policy SADM 18 of the emerging Local Plan and the NPPF.

Impact on living conditions of existing residents

9.96 The nearest residential properties to the proposed flats are those within Penn Way to the east of the site. Many of the properties within Penn Way are orientated so their flank wall and side gardens face toward the site. Separation distances vary between the proposed development and built form in Penn Way. There is an approximate separation distance of 21.5 metres between Block E and the nearest property in Penn Way. This distance increases to approximately 22.8 metres from Block A and approximately 29.5 metres from Block B. The spacing distance becomes much greater from the other proposed Blocks.

9.97 To the south of the site are three storey flatted blocks within Broadwater Crescent and two storey single dwellings. The nearest separation distance is approximately 10.5 metres and views between windows are oblique rather than direct.

9.98 To the west of the site, on the opposite side of the railway lines, are single dwellings within Longcroft Gardens and Longcroft Lane. The nearest separation distance is over 120 metres.

9.99 A Technical Note on Daylight and Sunlight has been undertaken by Antsey Horne. This includes an assessment of the potential changes to daylight and sunlight levels in the neighbouring properties. It also includes an assessment of the daylight and sunlight levels likely to be achieved in the proposed units and amenity spaces. Greengage Consultancy were instructed by the Local Planning Authority to assess the Daylight and Sunlight assessment submitted by the applicant.

9.100 Greengage Consultancy confirmed that overall the report and the calculations have been carried out in accordance with industry best practice, the modelling appears to be accurate and overall compliance with the criteria is very high. The proposal will therefore not give rise to a detrimental impact upon the amenity,

both indoor and outdoor, of existing or future neighbours by way of loss of daylight and sunlight.

- 9.101 Having regard to the layout and positioning of the proposed built form relative to existing properties, separation distances, location of windows and balconies, and soften landscaping, it is considered that the proposed development would not result in unacceptable levels of overlooking or loss of privacy. It is also considered that all nearby residential properties would receive acceptable levels of outlook.
- 9.102 To protect the amenity of existing residential properties in the near vicinity of the development and future occupiers from light spillage a condition is recommended requiring the installation of external lighting to be submitted and agreed with by the Local Planning Authority. This view is shared with by WHBC Public Protection and Health Officer.

Living conditions of future occupiers

- 9.103 All proposed units would meet the Nationally Described Space Standards as set by Government. It is evidenced that each property would receive acceptable levels of sunlight and daylight. It is also considered that each property would have satisfactory outlook. In terms of privacy, there is concern regarding loss of privacy from the public open space into the bedroom of Plot A008 and Plot B006. A planning condition can however secure fencing of an appropriate height with planting behind to mitigate any harmful impacts.
- 9.104 In terms of private external amenity space, the SDG requires that all residential development should incorporate private open space for the use of residents. The Council have no specific standards for the provision of garden sizes as it is considered that the design and layout of the garden in relation to the built environment should ensure that the garden is functional and usable in terms of its orientation, width, depth and shape.
- 9.105 Each unit would have access to private amenity in the form of either a balcony or terrace in excess of 5sqm. In addition to this, communal gardens with seating and planting are proposed for the apartment residents only. The scheme is considered to provide a sufficient amount of private and communal amenity space for the residential units.
- 9.106 Turning to air pollution, whilst the application is no longer considered EIA development, HCC Public Health confirmed that the submitted Air Quality chapter of Environmental Statement (ES) was carried out as per industry standard guidelines and practice, with the National Air Quality Objectives (NAQOS) and their Limit Values forming the basis of the air quality assessment of the proposed development. Within the ES, assessments were undertaken of the residual effect (dust; NO_x and PM emissions from construction traffic and from NRMM) upon existing and proposed residential properties. Within the construction environment management plan (CEMP) a package of mitigation measures are proposed, it is recommended these are secured by planning condition. Subject to the CEMP mitigation measures being conditioned, the assessment concluded that in both the construction and operational phase the development would not have a significant residual effect upon existing or future occupiers close to the site. WHBC Public Health and Protection Officer raised no objection in this regard.

- 9.107 The applicant also submitted a Health and Wellbeing Statement. This includes demonstrating how the proposal responds to the NHS Healthy Urban Planning Checklist criteria and meets the relevant planning policies and Garden City principles. The proposal is a mixed use development with active frontages, a community hub, outdoor seating and play spaces, therefore promoting social interaction. In addition to this, the proposal would enable a healthy and safe community through the provision of edible planting, the encouragement of walking and cycling and intention to incorporate the ideas, standards and apply for accreditation of Safety by Design as demonstrated in page 115 of the Design and Access Statement. On this basis, Hertfordshire Constabulary support the application from a crime prevention and safety aspect. The proposal is therefore considered to promote healthy and safe communities in line with the Garden City principle and Chapter 8 of the NPPF.
- 9.108 With regard to noise, the site is located close to the railway line and has the potential to be affected by noise from the railway, road, and commercial noise sources. Having consulted WHBC Public Health and Protection they have advised that the noise assessment submitted demonstrates that there are elevated noise levels across the site and this is especially relevant closer to the railway. A specific area of concern are the high LAMax levels that were monitored. To mitigate this specific noise conditions are recommended.
- 9.109 The noise impact assessment also states that outside amenity areas can be mitigated to comply with the 55dB upper limit level. This can be demonstrated by the submission of a noise model when demonstrating compliance with the conditions and highlighting specific mitigation. A condition is also recommended for the submission of a full and comprehensive BS4142 assessment to show compliance with the commercial noise condition. Following advice from WHBC Public Health and Protection it is considered through the use of planning conditions mitigation measures shall be implemented to ensure there is an adequate level of protection against noise in accordance with Policy R19 of the District Plan.
- 9.110 Accordingly, it is considered that subject to compliance with both of these reports and conditions, the proposed development would not impact unduly on future residents of these properties or existing neighbouring occupants, in line with the above policies.

6. Highways and parking considerations

- 9.111 The existing floor area of the site is 13,972 sqm with some 160 associated car parking spaces (in a mixture of surface level parking in the vicinity of Broadwater Crescent and a two storey basement beneath the main building). The only access to the site is provided via BioPark Drive, a 9.0m wide private road (consisting of 7.6m wide carriageway, 0.2m wide service strip, and 1.8m wide footway). BioPark Drive joins the A1000 Broadwater Road to the east via a simple crossover.

Impact on Highways Network

- 9.112 The existing site trip generation has been based on 'Employment Office' category within TRICs. It is noted that a sensitivity test of Business Park land use which contained more elements of B1(b) has also been undertaken. The Highway Authority have reviewed the trip generation and are satisfied with the outputs. The existing site trip generation has been based on 'Flats Privately Owned'

category within TRICs. The Highway Authority are satisfied that the resulting trip rates are representative.

- 9.113 The predicted number of trips suggest that overall the number of vehicles will be reduced in the peak hours following the proposed development, however the change of land use (B1 to C3) will mean that different arms of junctions will result in an increase and decrease in traffic – in the AM peak for a residential site vehicles will predominantly be departing, whereas for a business site vehicles would be arriving. Therefore, these changes may affect the operation of local junctions and increase (or decrease) queues and delays on certain arms. The Highways Authority commented that the impact of this development on the local highway network has been assessed and is shown to be acceptable with improvement to the public transport. This is to be secured via s106 contributions and Travel Plan.
- 9.114 In addition to this, the Highways Authority advised that if the application is granted planning permission, the access works to the public highway must be secured via a s278 agreement. This includes the site access junction on to the A1000 Broadwater Road, other possible connections and off-site works. The internal highways must remain private ownership and a maintenance plan must be submitted.
- 9.115 In order to secure the pedestrian and cycle route to the north of the site to connect with the Shredded Wheat development a condition is recommended. Reason being is this would provide future residents and visitors a more direct and convenient route towards the town centre.
- 9.116 In addition to this, the applicant has submitted a draft Construction Transport Management Plan (CTMP) (HG Construction – Draft CMP). The Highway Authority welcomed the draft submission and noted that many of the measures will be necessary to mitigate the construction impact of the proposed development. In order to cover the full requirements of a CTMP, it is recommended by way of condition that a final CTMP is submitted.

Car Parking Design

- 9.117 Whilst the Council is keen to ensure that design is not dominated by roads and provision for the car user, it must be remembered that it is unrealistic to design out the car and therefore parking provision should be incorporated as an integral part of design.
- 9.118 In this proposal, the majority of apartment car parking is located within the existing basement car park, which will be extended and would be accessible via a vehicle ramp. Within the basement car parking will be resident, visitor and wheelchair spaces. The layout of the level 1 and 2 basement car parking is considered acceptable. Block F will have 4 garage car parking spaces and the townhouses will have garages. It is also noted that there is an area at street level designated for community car parking and visitor parking. Whilst the car parking in this area would be visible within the streetscene, the proposal seeks to soften this area by installing climbers to the boundary fencing to the rear of the site. In addition to this, these spaces will be broken up due to the location of cycle parking and a refuse store. Car parking would therefore not appear dominant within the streetscene.

- 9.119 A Parking Management Strategy is set out at Section 7 of the Transport Assessment and appendix C of the same assessment shows the associated parking plans. Parking permits will be available to all flats via a 'first come, first served' basis with a maximum of one car parking permit being issued to each unit. Residents with an allocated basement space will be provided with a fob/ electronic key to permit vehicular access. Residents without an allocated space will not be provided a fob for vehicular entry. The spaces within the basement will also be numbered and allocated to specific residents.
- 9.120 The parking provision includes a 10% visitor parking allocation in the basement, a car club space at surface level near to the community hub, and over 20% of spaces are equipped with Electric Vehicle Charging Points. Residential blue badge parking provision is allocated in the basement close to the respective building core for each of the M4(3) dwellings. A visitor blue badge space is provided at surface level.
- 9.121 The proposal also includes the provision of Electric Vehicle charging at 10% active (22 spaces) and a further 10% (22 spaces) of passive provision. As such, EV charging will be secured by planning condition.

Car Parking Provision

- 9.122 In terms of car parking provision, paragraph 107 of the NPPF states that if setting local parking standards authorities should take into account the accessibility of the development, the type, mix and use of the development, availability of public transport, local car ownership levels and the overall need to reduce the use of high emission vehicles. Policy M14 of the District Plan 2005 and the Parking Standards Supplementary Planning Guidance (SPG) use maximums which is not consistent with the NPPF and are therefore afforded less weight.
- 9.123 In light of the above, the Council have produced an interim Policy for Car Parking Standards that states that parking provision will be assessed on a case by case basis and the existing maximum parking standards within the SPG should be taken as guidance only. This means that higher or lower car parking standards than those set out in the SPG can be proposed and determined on a case by case basis taking into account the relevant circumstances of the proposal, its size context and its wider surroundings. Parking standards should only be imposed where there is clear and compelling justification that they are necessary for managing the local road network.
- 9.124 The Parking SPG (2004) requirements in Zone 2 (which covers the northern part of the site) are 0.75 per 1-bed dwelling, 1 space per 2-bed dwelling, 1.5 space per 3-bed dwelling, 2 spaces per 4-bed dwelling, and 1 long term cycle space per unit (if no storage is provided). Block F and the townhouses are within Zone 3, where the SPG requirements are 1.25 for a 1-bed dwelling, 1.5 for a 2-bed dwelling, 2.25 for a 3-bed dwelling and 3 spaces for a 4-bed dwelling.
- 9.125 The proposal also include 112.4 square metres of community use for a gym/cafe (E/F2 use). When referring to the Car Parking Provision SPD, if the space was used as a café it would require 1 space per 5m² floorspace of dining area plus 3 spaces per 4 employees. As the community space would be non-residential development the zonal approach is applied. As the site falls within Zone 2 a further reduction of 25-50% of the overall maximum car parking provision applies. In that case, if the community space was used as a café the maximum car parking provision for the café would be between 5.5-11 spaces.

- 9.126 If the community space was used as a gym it would require 1 space per 15sqm gross floor area. When applying the zonal approach, if the space was used as a gym the maximum car parking provision would be 2–4 car parking spaces.
- 9.127 In this instance, due to the café requiring more car parking spaces this will be used when calculating the overall car parking provision on the site, as shown in the table below.

Table 1: Car Parking Provision

Zone	Number of bedrooms	Council's SPG	Frequency of Dwellings	Council's Guidance	Proposed Car Parking
2	1 bed	0.75	129	96.75	
	2 bed	1	123	123	
	3 bed	1.5	24	34.5	
	4 bed	2	0	0	
3	1 bed	1.25	0	0	
	2 bed	1.5	3	4.5	
	3 bed	2.25	2	4.5	
	4 bed	3	8	24	
	Total Residential		289	287.25	197
	Employment	1 space per 5sqm	112 sqm	22* 5.5-11	6 (including 1 disabled)
	Visitor Car Parking	n/a	0	0	22
	Car Club	n/a	n/a	0	1
	Motorcycle	n/a	n/a	0	15
	Total	n/a		309.25	226

*as it falls within Zone 2 the zonal approach applies of 25-50% of the maximum demand-based standard.

- 9.128 The Council's parking guidance SPG recommends that in this area a maximum of 287.25 spaces are provided for residents and 5.5 - 11 spaces for cafes. The SPG therefore recommends a maximum of 298.25 car parking spaces are provided onsite.
- 9.129 In this instance, the proposal includes 197 car parking spaces for residents (inclusive of standard and disabled spaces) and 6 spaces for employment uses. In addition to this, the proposal includes 22 visitor car parking spaces, 1 car club and 15 motorcycle spaces. The amount of car parking proposed is 86 car parking space less than the maximum car parking provision.
- 9.130 As previously noted, the Council's parking guidance SPG is only a guidance and parking provision will be assessed on a case by case basis. Therefore, whilst the car parking provision proposed for residents is lower than those set out in the

SPD this is not objected to. Rather, the onus is on developers to demonstrate through transport information submitted alongside their planning applications that a greater or lesser level of car parking provision is appropriate.

- 9.131 Within the Transport Statement the applicant has submitted justification for the car parking provision, including expressing that the site is within a sustainable location. There are bus stops located outside the site access on Broadwater Road (northbound and southbound circa 50m). These bus stops are served by 601 Alban Way bus route with a route between Welwyn Garden City and Borehamwood via Hatfield and St Albans, and there are two services per hour across the weekday. Additional bus stops are located approximately 405m from the site on Peartree Lane which are served by the 403 and 404 services. Beyond this there are also bus stops on Bridge Road approximately 750m from the site (10 minute walk). In addition to bus services, the site is approximately 900m (11 minutes) from Welwyn Garden City railway station. There are train journeys southbound to London every 2 hours and train journeys northbound to Royston every 2 hours and Cambridge every hour. This demonstrates there are public transport services highly accessible to the site, thus encouraging sustainable travel. This view is shared with by Hertfordshire County Council (HCC) Highways Authority.
- 9.132 With regard to the existing bus services HCC Highways Authority commented that the number 601 is a contracted service and due to lack of financial fund there is no evening or Sat/Sun bus service at the present time. A planning contribution has been sought towards the bus service to enable the provision of an extra 4 hours evening service and 12 hours Saturday/Sunday service for the number 601. It is considered that this is vital to support a residential development for this scale. If permission is granted, a bus service contribution (approx. £100k for 2 years) is recommended to be secured via S106 agreement. This has been agreed with by the applicant.
- 9.133 The justification also refers to the 2011 Census data. The application site falls within the Middle Super Output Area (MSOA) 'Welwyn and Hatfield 007', and adjacent the boundary of the MSOA 006 (to the west of the railway line). Due to the proximity of the site to the latter area the average of both MSOA's are referred to. The Census data reveals that 57% of existing residents travel to work by car 57%, with a further 19% walking or cycling and 17% by public transport. The data also demonstrates the average car ownership level is 1.11, however the average car ownership of residents living in flats reduces to 0.62 car units. When considering the number of car parking spaces (181 car parking spaces) per residential apartments (281 apartments) proposed in this scheme it would equate to 0.64 spaces per unit, thus marginally exceeding the average car parking occupancy.
- 9.134 The proposal also includes 1 car club, which according to CoMo (a charity supporting the introduction of sustainable transport modes) have calculated that for every car club vehicle, it leads to a removal of 10.5 private cars from the road network as a result of member selling/not replacing private vehicles. Under the extant permission (6/2018/0171/MAJ) Shredded Wheat development it was concluded that a car club would equate to the equivalent of 6 car parking spaces on site. As part of the Travel Plan measures, and during the sales processes of the units, future residents will be provided with information regarding the car clubs, membership, and benefits.

- 9.135 The proposal equates to an overall parking ratio of 0.76 spaces per dwelling. In contrast, the consented Shredded Wheat scheme was approved with a car parking ratio of 0.7 spaces. The approved car parking on the south side of the Shredded Wheat scheme is arguably more relevant for this scheme given the close proximity to the site and also as it was for residential use only. Under the extant permission a total of 472 car parking spaces were approved, resulting in a ratio of 0.73 spaces per dwelling on the South Side, when including visitor spaces and car clubs. This proposal therefore exceeds that approved on the Shredded Wheat scheme.
- 9.136 Further to this, when disregarding visitor and car club spaces within the south side on the Shredded Wheat development, residential permit spaces equated to 0.57 spaces per unit. As for this proposal, when removing commercial and visitor spaces and car clubs the scheme would provide 0.68 spaces per residential unit. Again, this proposal would exceed the car parking provision provided on the consented Shredded Wheat scheme within the south side.
- 9.137 Based on the above justification, it is considered the level of car parking proposed is satisfactory given the sustainable location and mitigation measures. This view is shared with by the Highways Authority who commented "*the provision is appropriate on the basis that it is coupled with the improvements to the active travel and sustainable transport networks that will encourage a mode share shift from private vehicle use*".

Cycle Parking

- 9.138 The proposal also includes cycle parking provision for each individual flat and each of the town houses will have a private store in their gardens which accords with the Parking SPG. In addition to this, the proposal includes an additional 10 cycle parking spaces within a secure bike shelter for visitors.
- 9.139 As for the community hub, one cycle parking space will be provided within the unit for long-stay (employees) and a further eight cycle parking spaces will be located adjacent to the community hub within a covered area for visitors. The overall cycle parking provision would exceed that required by policy (2 cycle parking spaces for a café or 6 cycle parking spaces for a gym). A planning condition is recommended to ensure the cycle parking is provided prior to any occupation.
- 9.140 The HCC Highways Authority noted that the Transport Assessment has stated the proposal will also safeguard a potential pedestrian and cycle route to the north of the site to connect with the emerging Wheat Quarter development. This would provide future residents and visitors a more direct route towards Welwyn Garden City railway station and Welwyn town centre for access for additional services and facilities. The safeguarding of this route is welcomed and if permission is granted recommend that it is secured by planning condition. This view is shared by the Highways Authority.
- 9.141 In summary, the proposal would provide an acceptable level of on-site car parking and therefore no objections are raised in regards to Policy M14 of the District Plan; the SPG Parking Standards; the Council's Interim Policy for Car Parking Standards; and the NPPF.

7. Other considerations

i) Housing Mix

9.142 As for the housing mix, Policy SP 7 of the emerging Local Plan states that proposals for 11 or more new dwellings should demonstrate how the mix of tenure, type and size of housing proposed on sites will reflect the Council's latest evidence of housing need and market demand and contribute towards meeting the varied needs of different households. The most up to date evidence is found in the Technical OAN paper (June 2019) which has been produced in connection with the Local Plan examination. This states that the implied size of housing required (2013 – 2032) is as follows:

1 bed	2 bed	3 bed	4+ bed
14%	23%	41%	22%

9.143 This paper also sets out that the implied type of housing required (2013 – 2032) is 77% houses and 23% flats.

9.144 The proposal includes 8 x 4-bed (3%) houses and 281 flats comprising of 129 x 1-bed (44%); 126 x 2-bed (44%); and 26 x 3-bed (9%). The proposal would not therefore meet the requirements of the latest evidence of housing need and market demand. The benefits associated with the proposed development therefore need to be balanced against the mix of dwellings proposed.

9.145 Policy H10 of the District Plan requires that all residential developments involving 5 or more dwellings will be required to provide a proportion of dwellings to be built to lifetime homes standards. Policy SP 7 of the emerging Local Plan requires that at least 20% of all new dwellings on sites involving 5 or more dwellings will be required to meet Building Regulations Part M4(2) standards for 'accessible and adaptable dwellings' (or as subsequently amended), the delivery of which should be distributed across market and affordable tenures. In accordance with WHBC guidance, 10% of the residential dwellings have been designed as wheelchair adaptable units based on Building Regulations Part M. There are also 29 blue badge parking spaces provided, which are distributed around each basement core, along with one at ground level for access to the Community Hub. To ensure the requirements of these policies are met, it is recommended that a condition is attached to any grant of permission that requires a scheme for the delivery of accessible and adaptable homes is submitted and approved.

ii) Ecology

9.146 Paragraph 174 of the NPPF states that the planning decisions should contribute to and enhance the natural and local environment by minimising impacts on biodiversity and delivering net gains in bio diversity where possible. Paragraph 180 of the NPPF goes on to listed principles that Local Authorities should apply when determining a planning application. It is stated within Paragraph 180(d) of the NPPF that "opportunities to improve biodiversity in and around developments should be integrated as part of their design, especially where this can secure measurable net gains for biodiversity or enhance public access to nature where this is appropriate".

- 9.147 District Plan Policy R11 seeks to conserve the biodiversity of the borough and seek opportunities for enhancement to ensure no net loss of biodiversity. Policy SADM 16 of the emerging Local Plan echoes the adopted policy.
- 9.148 Policy R16 of the District Plan refers to Protection of Species and outlines that planning permission will not be granted for and development of use of land which would have an adverse impact on badgers or species protected by schedules 1, 5 or 8 of the 1981 Wildlife and Countryside Act, as amended.
- 9.149 The existing site is considered to have a very low ecological value, with biodiversity features limited to boundary vegetation along the southern edge.
- 9.150 The applicant is supported by an Ecological Impact Assessment and Biodiversity Net Gain report that outlines wildlife initiatives including, new tree planting, biodiverse green and brown roofs, fruiting trees and shrub planting, RHS approved pollinator ornamental planting, flowering meadow grassland and native hedgerows. Alongside these elements, bird and bat boxes will be integrated into the facades of buildings where appropriate, along with hibernacula and hedgehog friendly fences to allow their movement across the site, as well as including hedgehog hibernation/nesting boxes along the commuting corridors, an orchard and insect boxes. All of the above contributes towards a biodiversity net gain of over 700% and introduces wildlife into the development. It is recommended that the ecological enhancements are secured by way of condition. In addition to this, a condition is recommended to be applied to protect breeding birds during the nesting season.
- 9.151 As such, there would be no conflict with the NPPF, Policies R11 and R16 of the District Plan and Policy SADM 16 of the emerging Local Plan. This view is shared with Natural England, Herts & Middlesex Wildlife Trust and Hertfordshire Ecology.

iii) Flood risk and sustainable drainage

- 9.152 The NPPF deals with issues of climate change and flooding and by means of the sequential test seeks to steer new development to areas with the lowest probability of flooding. The flood zones are the starting point for this approach. The EA identifies Flood Zones 2 & 3 and all land outside those zones is in flood Zone 1. This site is located within Flood zone 1 i.e. a low probability of flooding.
- 9.153 Following a review of the Flood Risk Assessment and Drainage Strategy report prepared by Curtins Consulting Ltd, reference 077090-CUR-00-XX-RP-D-92001, revision P02, dated 5 February 2021, the LLFA Response Letter prepared by Curtins Consulting Ltd, reference 077090/LT/1, dated 2nd February 2021 and the additional information submitted to the LPA, we can confirm that we Hertfordshire County Council as the Lead Local Flood Authority are now in a position to remove our objection on flood risk grounds.

iv) Sustainability and Renewable Energy

- 9.154 Policy R3 of the District Plan states that 'the Council will expect all development to (i) include measures to maximise energy conservation through the design of buildings...' Policy SD1 of the District Plan states that 'development proposals will be permitted where it can be demonstrated that the principles of sustainable development are satisfied'.

- 9.155 Policy SP10 of the emerging Local Plan sets out the strategic approach to promoting more environmentally sustainable development within the borough, supported by more detailed criteria set out in SADM 13 and SADM 14. Policy SP 10 states that proposals that adopt sustainable design and construction principles, as set out below, within an integrated design solution will be supported. This should be demonstrated via a Sustainable Design Statement and associated plans.
- 9.156 Section 7 of the Broadwater Road West SPD states that development within the Opportunity Area is required to achieve a site target of at least 10% energy use to come from renewable or low carbon sources.
- 9.157 A Sustainability Statement was submitted highlighting the key opportunities to the design and construction teams to enhance the sustainability credentials of the scheme.
- 9.158 An Energy Strategy report has been submitted by Stroma BE Ltd. (report ref EST10-20-84957). The report details a fabric first approach to limit the total energy demand for the scheme, throughout its operational life. The net result is that the scheme is predicted to save 12.86% from the residential element and 13.86% from the commercial unit, of the predicted carbon emissions with reference to the current building regulations. The proposal would therefore exceed the requirements defined within the current and future planning policies, including the 10% emissions saving target within the Broadwater Road SPD (2008).
- 9.159 Affinity Water have been consulted for this application and outline that the application site is located within a Government designated 'water stressed area'. A condition is recommended to improve water efficiency. Having regard to both Policy SADM 13 of the emerging Local Plan and the NPPF in terms of sustainable development, this measure is both necessary and reasonable and can be secured through a grant of planning permission.
- 9.160 In addition to a fabric first approach, the scheme includes promotion of sustainable transport, water saving design, landscape and ecology enhancements, materials, waste management, noise and light pollution measures and renewable energy sources. All these can be secured by condition. The proposal is therefore considered to satisfy Policies SD1 and R3 of the District Plan, Policies SP 10 and SADM 13 of the emerging Local Plan and the Broadwater Road West SPD.

v) Contaminated land

- 9.161 District Plan Policy R2 states that the Council will encourage development on land that may be contaminated. Investigations have determined that the land at the proposed development site is not contaminated. However, there is a possibility that such a discovery could be made during the construction process. Therefore an unexpected finds condition is recommended for this application. This view is shared with WHBC Public Protection and Health Officer.
- 9.162 The Environment Agency have also advised that surface water must not be disposed of via direct infiltration into the ground via a soakaway and that piling or any other foundation designs using penetrative methods should not cause preferential pathways for contaminants to migrate to groundwater and cause pollution. Preventative measures can be secured through a planning condition.

9.163 Accordingly, subject to the imposition of the above mentioned condition, the proposal would not be contrary to Policy R2 or R7 of the District or the NPPF.

vi) Waste Management

9.164 Policy R5 of the District Plan states that the Council will require applications for larger schemes to include details of the measures to be taken in the design, construction, operation, occupation and demolition of existing buildings on site to:

- Minimise the amount of waste generated;
- Re-use or re-cycle suitable waste materials generated
- Minimise the pollution potential of unavoidable waste
- Treat and dispose of the remaining waste in an environmentally acceptable manner; and
- To maximise utilisation of appropriate secondary construction materials, including recycled aggregates

9.165 The NPPF seeks to minimise waste and pollution as part of the environmental objective of sustainable development.

9.166 Site Waste Management Plan (SWMP) has been submitted alongside the planning application and provides details of waste minimisation opportunities, forecast of resource usage and duty of care compliance checks. It also provides space for the recording of actual waste arisings against the forecasted arisings.

9.167 Hertfordshire County Council's Minerals and Waste Team have been consulted for this application and are satisfied with its content. A planning condition can ensure compliance with this plan.

vii) Archaeology

9.168 District Plan Policy R29 states that the Council will require developers to undertake an archaeological assessment where the proposed development may affect remains of archaeological significance, or may be sited in an area of archaeological potential. This approach is broadly consistent with the NPPF.

9.169 HCC's Historic Environment Advisor has been consulted for this application and highlights that while the site is circa 250m to the southeast of an Area of Archaeological Significance, which contains late prehistoric and Roman remains, it is strongly unlikely that any archaeological remains could have survived the construction of the existing building which includes two levels of basement.

9.170 The proposal would be largely within the footprint of the existing building, with the exception of the two southernmost blocks. These two southern blocks (Blocks F and G) are furthest away from the known archaeology and alone are not particularly large in size. This area was historically a playground and a car park.

9.171 It is therefore considered that the development is unlikely to have an impact on heritage assets of archaeological interest and there would be no conflict with Policy R29 or the NPPF in this respect.

viii) Environmental Impact Assessment

- 9.172 The application was submitted supported with an Environmental Statement. As stated within the applicant's Environment Statement, a Screening Direction was made to the Secretary of State on the 20th November 2020 (see ES Appendix 2.3). The Secretary of State responded on the 4th February 2021 concluding that in exercise of the powers conferred on him by regulation 7(5) of the 2017 Regulations the Secretary of State hereby directs that the proposed development described in your request and the documents submitted with it, is not 'EIA development' within the meaning of the 2017 Regulations.
- 9.173 As the Secretary of State's letter has been received during the determination of this planning application it forms part of the assessment. As a result of the direction it is considered that the proposed development is no longer considered to constitute EIA development.

ix) Permitted development rights

- 9.174 The 8 townhouses would benefit from permitted development rights. Paragraph 54 of the NPPF states that planning conditions should not be used to restrict national permitted development rights unless there is a clear justification to do so.
- 9.175 The proposed townhouses have been very carefully designed, in terms of their size, scale, height, form and appearance, to respect and relate to the character of the immediate suburban form to the east and south-east of their location. The built form to plot ratio is also considered to be adequately proportionate.
- 9.176 It is considered that development under Class A could result in overdevelopment of each plot and excessively small private rear gardens. The same could apply to outbuildings under Class E. It is also unclear from the submitted drawings whether the undercroft parking areas for each townhouse have open access a garage door like opening. In any case, removal of Class A permitted development rights would prevent this opening from being closed off thereby eliminating on-site car parking provision.
- 9.177 Enlargements under Class AA would be contrary to one of the key design intentions of the overall scheme which is to lower the height of the built form toward the most sensitive southern location of the site and ensure that the development assimilates with the mixed character of the context. In terms of Class B, the erection of dormers on the side roof slopes of the townhouses could significantly detract from the design of the townhouses and would be out of character with the area. The same would apply for hip-to-gable enlargements.
- 9.178 It is therefore considered reasonable and necessary to remove permitted development rights for: development under Class A, AA, B, and E for new dwellings. This can be secured through a planning condition.

8. Planning obligations

- 9.179 The NPPF sets out that Local Planning Authorities should consider whether otherwise unacceptable development could be made acceptable through the use of conditions or planning obligations. Planning obligations should only be sought where they meet all of the following tests set out in Regulation 122 of the Community Infrastructure Levy Regulations 2010 (as amended):

- Necessary to make the development acceptable in planning terms
- Directly related to the development; and
- Fairly and reasonably related in scale and kind to the development.

9.180 The Council has not adopted a Community Infrastructure Levy and therefore where a planning obligation is proposed for a development, The Community Infrastructure Levy Regulations 2010, which came into effect from 6 April 2010, has introduced regulation 122 which provides limitations on the use of planning obligations.

Affordable Housing

9.181 Policy H7 of the District Plan requires that a minimum of 30% subsidised housing should be provided on suitable sites. This is echoed within Policy SP 7 of the emerging Local Plan, which states that subject to viability, 30% of affordable housing will be sought on development sites in Welwyn Garden City.

9.182 As set out in the Council's Planning Obligations SPD, the Council recognises that in certain market conditions, the overall level of contribution attributed to a scheme can affect the financial viability of a development proposal. In these circumstances an applicant would be expected to submit a viability appraisal and to pay for the Council to have this appraisal independently checked and verified.

9.183 In the context of this advice and the policy position that it creates, the Council was informed by the applicant that the scheme designed is not able to deliver any affordable housing and remain viable. A Financial Viability Statement was submitted and this was assessed by an independent advisor Aspinall Verdi on behalf of the Council. Aspinall Verdi reviewed the Financial Viability Statement and concluded that the proposed development would not be viable with affordable housing. On this basis, whilst the scheme would not provide affordable housing, it would satisfy Policy H7 of the District Plan and Policy SP 7 of the emerging Local Plan.

9.184 Whilst the proposal is unviable, the applicant has agreed to provide 10% affordable housing (through shared ownership tenure only) equating to 29 units. The Council's Housing Development Team have been consulted and welcome this provision.

Hertfordshire County Council Contributions

9.185 Hertfordshire County Council request that financial contributions are required to fund various Hertfordshire County Council projects in order to mitigate the impacts of the development. These include:

- Primary Education - £872,102 toward new 3FE Peartree Primary School
- Secondary Education - £138,694 toward the expansion of Ridgeway Academy Secondary School, from 7FE to 8FE
- Childcare Services - £12,200 toward new 3FE Peartree Primary School
- Library Services - £31,952 toward enhancement and improvement of Welwyn Garden City Library
- Youth Services - £3,668 toward increasing the capacity at Welwyn Garden City Young People's Centre (or its re-provision)
- Waste Services - £35,902 toward the development of the Tewin Road Recycling Centre

- Sustainable Travel - £192,772 toward bus service improvement for two years and packages PK14 of the South Central Growth and Transport Plan

Fire hydrant provision is also requested by Hertfordshire County Council through a planning obligation. However, it is considered that it would be more appropriate to secure this by condition.

WHBC Contributions:

9.186 WHBC request that financial contributions are required toward indoor and outdoor sports facilities and waste and recycling provision in order to mitigate the impacts of the development. Financial contributions and projects as follows:

- Indoor Sports Facilities - £210,429 toward a club-led indoor bowls facility at King George V Playing Fields in Welwyn Garden City
- Outdoor Sports Facilities - £194,417 toward one of the following three projects:
 - a) the development and building of a pump track which is now part of the British Cycling development pathway in BMX;
 - b) Development and improvement works of the Cycling Velodrom at Gosling Sports park; or
 - c) Development and improvement work of the athletics track at Gosling Sports.
- Waste and Recycling - £22,336.64 toward the provision of household waste bins and mini recycling centres

NHS Contributions

9.187 The NHS request financial contributions are required toward a number of services to avoid placing an additional burden on the existing community. This includes:

- Community Healthcare - £52,607 toward towards a project to increase the clinical capacity at Queensway Health Centre in Hatfield (including but not limited to the reconfiguration of the facility and the installation of a lift)
- General Medical Services - £204,612 toward three existing practices within the Peartree Group by way of expanding and/or reconfiguring and/or creating an additional practice
- Mental Health Services - £58,306 toward the evolving expansion, re-configuration and refurbishment of Rosanne House, Welwyn Garden City to increase capacity

9.188 Other obligations include:

- Review mechanism for affordable housing
- Management Scheme for open spaces

- Management Scheme for SUDS
- Car parking management strategy
- Travel Plan

9.189 In accordance with the Council's Planning Obligations SPD, a monitoring fee of £5000.00 will also be required and payment will be required on completion of the S106 Agreement. There would also be a £6,000 monitoring charge for the Travel Plan.

9.190 All S106 financial obligations are subject to indexation.

9.191 These requested contributions are considered to be reasonable and to pass the necessary Community Infrastructure Levy 122 tests as the works are considered necessary to make the development acceptable, directly related to the development and fairly and reasonably related in scale and kind to the development.

9.192 The applicant and Council have entered into negotiations to address the points outlined above and a draft Section 106 Agreement has been agreed in principle. If the Development Management Committee resolve to grant planning permission subject of the completion of the Section 106 Agreement, this document will be completed.

9.193 The proposal, subject to the completion of a Section 106 Agreement, would comply with Policy IM2; the Planning Obligations SPD; the NPPF and CIL Regulations 2010, as amended.

9. The planning balancing

9.194 The proposed development has been considered by Historic England to result in less than substantial harm to the setting of Hatfield House and the Registered Parks and Gardens. There would also be a degree of conflict with the development plan in terms of design (by virtue of the heritage harm) and non-policy compliant dwelling mix.

9.195 Under Paragraph 199-200 of the NPPF, great weight should be given to the conservation of designated heritage assets even where the harm would be less than substantial, and any harm should require a clear and convincing justification. Section 66 (1) of the Planning (Listed Buildings and Conservation Areas) Act 1990 requires special regard to be given to the desirability of preserving the Listed Building or its setting or any features of special architectural or historic interest which it possesses.

9.196 Paragraph 202 of the NPPF states that where a development will lead to less than substantial harm to the significance of a designated heritage asset, this harm should be weighed against the public benefits of the proposal.

9.197 The PPG provides clear guidance in paragraph 020 on the meaning of 'public benefits', particularly in relation to historic environment policy in the NPPF. The PPG makes clear that public benefits should be measured according to the delivery of the three key drivers of sustainable development: economic, social and environmental outcomes, all of which are reflected in the objectives of the planning system, as per Paragraph 8 of the NPPF. Public benefits do not always

have to be visible or accessible to the public in order to be genuine public benefits.

9.198 The public benefits of the scheme are considered to consist of the following:

Provision of market housing

9.199 The Council cannot demonstrate a five year supply of deliverable homes. The shortfall is considerable and significant. The proposal would therefore boost the supply within the area.

9.200 The conflict with the development plan in terms of housing mix does reduce the degree of weight afforded to this benefit. Notwithstanding this, the provision of market housing is afforded significant weight in favour of the proposal.

Provision of affordable housing

9.201 There are serious shortcomings in terms of affordable housing delivery in the Borough. While the proposed affordable housing provision would not accord with the Council's latest evidence of need, viability evidence has rendered the development unviable in the absence of affordable housing. The 10% (29 unit) shared ownership provision has been offered by the applicant.

9.202 Taking the above into account, substantial weight is attached to the delivery of 29 affordable homes in this location in favour of the proposal.

Ecological enhancements

9.203 The provision of extensive soft landscaping and green roofs will result in an on-site biodiversity net gain of over 700%. Given the likely increased provision over and above that normally required, moderate weight is attached to this factor in favour of the proposal.

Vitality and employment generation

9.204 The population increase arising from the development will contribute toward the vitality of Welwyn Garden City town centre and support business growth.

9.205 There would also be employment generation in the short to medium term through construction works; long term employment at the community hub and management of the buildings and open spaces; and potential need for additional employment in nearby shops and commercial premises through additional demand and spending.

9.206 In terms of employment generation relative the existing building and current employment land designation, it is noted that the existing building is vacant and the marketing evidence indicates that there is no realistic prospect of the BioPark reopening for research/development purposes or another commercial led use. As such, it is considered that the proposal would likely result in a net employment benefit. Moderate weight is attached to this economic benefit in favour of the proposal.

9.207 Additional public benefits are considered to include: the provision of public open space on-site; use of renewable energy sources; and improvement to the quality of the townscape as a result of the development. Moderate weight is attached to each of these factors in favour of the proposal.

9.208 Taking account of the above, it is considered that the public benefits would outweigh the less than substantial harm to the setting of Hatfield House and the Registered Parks and Gardens.

The presumption in favour of sustainable development

9.209 Paragraph 11 of the NPPF begins by stating that decisions should apply a presumption in favour of sustainable development. Paragraph 11(d) then goes on to explain that for decision-taking this means: where there are no relevant development plan policies, or the policies which are most important for determining the application are out-of-date, planning permission should be granted unless:

- i. the application of policies in the Framework that protect areas or assets of particular importance provides a clear reason for refusing the development proposed; or
- ii. any adverse impacts of doing so would significantly and demonstrably outweigh the benefits, when assessed against the policies in this Framework taken as a whole.

9.210 Assets of particular importance include designated heritage assets (Footnote 7). Footnote 8 of paragraph 11 states that for applications involving the provision of housing, out-of-date policies include situations where the local planning authority cannot demonstrate a five year supply of deliverable housing sites.

9.211 The Council cannot demonstrate a 5 year supply of deliverable housing sites and, as such, the presumption in favour of sustainable development is relevant.

9.212 It has been identified that the public benefits of the proposal would outweigh the harm to the subject designated heritage assets. Having regard to this, the application of such policies in the NPPF would not provide a clear reason for refusing the development proposed.

9.213 What now remains are the other harms, comprising a degree of conflict with the development plan in terms of the dwelling mix and degree of design harm by virtue of the identified less than substantial harm to the setting of a designated heritage asset. It is considered that the adverse impacts would not significantly and demonstrably outweigh the benefits (as highlighted above), when assessed against the policies in the NPPF taken as a whole.

10 Conclusion

10.1 The proposed development comprising 281 flats, 8 townhouses and community gym/café with associated car parking, landscaping and amenity space is considered to be acceptable subject to the imposition of conditions and a planning obligation. Accordingly, for the reasons given, the proposal is recommended for approval.

11 Recommendation

11.1 It is recommended that planning permission be approved subject to: the completion of a satisfactory S106 planning agreement; the agreement of any necessary extensions to the statutory determination period to complete this agreement for the planning obligations set out in section 8 above; and the following conditions:

PRE-COMMENCEMENT CONDITIONS

1. Development must not commence until a Construction Management Plan (CMP) has been submitted to and approved in writing by the local planning authority. The CMP shall include details of:
 - a) Hours of construction works;
 - b) Construction vehicle numbers, type, routing;
 - c) Traffic management requirements;
 - d) Construction and storage compounds (including areas designated for car parking, loading/unloading and turning areas);
 - e) Siting and details of wheel washing facilities;
 - f) Cleaning of site entrances, site tracks and the adjacent public highway;
 - g) Timing of construction activities (including delivery times and removal of waste) and to avoid school pick up/drop off times;
 - h) Provision of sufficient on-site parking prior to commencement of construction activities;
 - i) Post construction restoration/reinstatement of the working areas and temporary access to the public highway;
 - j) Where works cannot be contained wholly within the site a plan should be submitted showing the site layout on the highway including extent of hoarding, pedestrian routes and remaining road width for vehicle movements;
 - k) Provision of hoarding around the site;
 - l) Noise control measures to minimise noise and vibration; and
 - m) Dust control measures

The construction of the development shall not be carried out otherwise than in accordance with the approved CMP.

REASON: In order to protect highway safety and the amenity of other users of the public highway and rights of way and the amenity and living conditions of the wider public in line with the mitigation measures set out in the Environmental Statement and in accordance with the National Planning Policy Framework.

2. Piling or any other foundation designs using penetrative methods shall not be carried out other than with the written consent of the local planning authority.

The development shall be carried out in accordance with the approved details.

REASON: To protect and prevent the pollution of controlled waters from mobilised contaminants, in accordance with Policies R2 and R7 of the

Welwyn Hatfield District Plan 2005, Policy SADM 18 of the Welwyn Hatfield Borough Council Draft Local Plan Proposed Submission August 2016 and the National Planning Policy Framework.

3. No development above ground (other than works of demolition) and no drainage works shall take place until a detailed surface water drainage scheme for the site based on sustainable drainage principles has been submitted to and approved in writing by the local planning authority.

The scheme shall include:

- a) Full, detailed modelling for the surface water drainage network to demonstrate how the system operates during up to and including the 1 in 1 year, the 1 in 30 year and the 1 in 100 year rainfall event including a 40% allowance for climate change. Half drain down times for all storage features should be included;
- b) Full, detailed, engineering drawings of any SuDS, surface water storage or conveyance features including cross and long sections, location, size, volume, depth and any inlet and outlet features. This should be supported by a clearly labelled drainage layout plan showing any SuDS and pipe networks. The plan should show any pipe 'node numbers' that have been referred to in network calculations and it should also show invert and cover levels of manholes. Total storage volumes provided within each storage feature should be identified;
- c) Detailed engineered drawings of the proposed SuDS features including cross section drawings, their size, volume, depth and any inlet and outlet features including any connecting pipe runs;
- d) Demonstrate an appropriate SuDS management and treatment train;
- e) Details of final exceedance routes, including those for an event which exceeds the 1 in 100 year rainfall event including climate change event;
- f) Detailed management plan to include arrangements for adoption and any other arrangements to secure the operation of the scheme throughout its lifetime; and
- g) Details showing how surface water on the site is to be intercepted and disposed of separately so that it does not discharge onto the highway carriageway

The approved scheme must be implemented and subsequently maintained, in accordance with the timing / phasing arrangements embodied within the scheme.

REASON: To prevent the increased risk of flooding, both on and off site, and, in respect of (g), to avoid the carriage of extraneous material or surface water onto the highway in the interest of highway safety, in accordance with Policies SADM 2 and SADM 14 of the Welwyn Hatfield Borough Council Draft Local Plan Proposed Submission August 2016, and the National Planning Policy Framework.

4. The development permitted shall be carried out in accordance with the sustainable urban drainage principles and the following mitigation measures:
- a) Limiting the surface water runoff generated by the critical storm events so that it should not exceed the surface water runoff rate of 1.6 l/s (or a rate agreed with the LPA) during the 1 in 100 year event plus a 40% allowance for climate change. If an increased discharge rate is required to ensure effective drain down times, this must not be greater than 5.3 l/s for up to and including the 1 in 100 year event plus a 40% allowance for climate change;
 - b) Providing storage to ensure no increase in surface water runoff volumes for all rainfall events up to and including the 1 in 100 year plus climate change event plus a 40% allowance for climate change, providing a minimum of around 840 m³ (or such storage volume as agreed with the LPA) of storage volume in features including; permeable paving with sub-base storage, an attenuation basin, green roofs, bioretention areas and an underground attenuation tank;
 - c) Discharge of surface water from the private drainage network to be directed into the existing Thames Water surface water sewer network on Broadwater Road; and
 - d) Surface water must not be disposed of via direct infiltration into the ground via a soakaway.

The mitigation measures shall be fully implemented prior to first occupation of the development and subsequently in accordance with the timing / phasing arrangements embodied within the scheme.

REASON: To prevent flooding by ensuring the satisfactory storage and disposal of surface water from the site; and to reduce the risk of flooding to the proposed development and future occupants: and to ensure that direct infiltration via soakaways will not be used due to the potential presence of contaminated land and the risk of groundwater pollution, in accordance with Policies R2 and R7 of the Welwyn Hatfield District Plan, Policies SADM 14 and SADM 18 of the Welwyn Hatfield Borough Council Draft Local Plan Proposed Submission August 2016, and the National Planning Policy Framework.

5. Development must not commence (other than works of demolition) until a surface water management plan for the construction phase of the development is submitted to and approved in writing by the Local Planning Authority.

The approved surface water management plan must be fully adhered to from start to completion of the development.

REASON: To prevent the increased risk of surface water flooding, to improve and protect water quality, protect natural habitats and the amenity of residents during the construction phases of the development, in accordance with Policy R7 and R11 of the Welwyn Hatfield District Plan, Policy SADM 14 of the Welwyn Hatfield Borough Council Draft Local Plan Proposed Submission August 2016, and the National Planning Policy Framework.

6. The submitted Site Resource Management Plan (by HG Construction, 17 December 2020) must be adhered to from start to completion of the development.

REASON: To minimise waste and pollution from the development, in accordance with Policy R5 of the Welwyn Hatfield District Plan 2005, Policy SP 10 of the Welwyn Hatfield Borough Council Draft Local Plan Proposed Submission August 2016, and the National Planning Policy Framework'.

7. The Arboricultural Method Statement contained within the submitted Arboricultural Report (by David Clarke Chartered Landscape Architect and Consultant Arboriculturist Limited, December 2020) and associated Tree Protection Plan (drawing no. TPP/BBRWGCH/010 A) must be adhered to in full.

REASON: To protect retained trees and in the interest of the visual amenity of the site and area, in accordance with Policies D2, D8 and R17 of the Welwyn Hatfield District Plan; Policy SADM 16 of the Welwyn Hatfield Borough Council Draft Local Plan Proposed Submission August 2016, and the National Planning Policy Framework.

PRIOR TO ABOVE GROUND DEVELOPMENT

8. Part A - Notwithstanding the details indicated on the submitted drawings, no on-site works above slab level shall commence until a detailed scheme for the offsite highway improvement works as indicated on drawing number ITL16195-GA-005 Rev B (contained within the submitted Technical Note by i-Transport, 19 February 2021) have been submitted to and approved in writing by the Local Planning Authority.

Part B - Prior to the first occupation of the development, the improvement works referred to in part A of this condition shall be completed in accordance with the approved details.

REASON: To ensure that the highway improvement works are designed to an appropriate standard in the interest of highway safety, in accordance with Policy SADM 2 of the Welwyn Hatfield Borough Council Draft Local Plan Proposed Submission August 2016 and the National Planning Policy Framework.

9. No development above ground level (excluding works of demolition) shall take place until a scheme for the provision of adequate water supplies and fire hydrants, necessary for firefighting purposes at the site, has been submitted to and approved in writing by the Local Planning Authority. No part of the development (including any dwelling) shall be occupied until the scheme has been implemented in accordance with the approved details.

REASON: To ensure adequate water infrastructure provision is made on site for the local fire service to discharge its statutory firefighting duties, in accordance with the National Planning Policy Framework.

10. No development above ground level (other than works of demolition) shall take place until samples of the materials to be used in the construction of the external surfaces of the buildings hereby granted have been submitted to and approved in writing by the Local Planning Authority. The development shall be

implemented using the approved materials and subsequently, the approved materials shall not be changed.

REASON: To ensure a satisfactory standard of development in the interests of visual amenity in accordance with Policies D1 and D2 of the Welwyn Hatfield District Plan 2005, Policy SP 9 of the Welwyn Hatfield Borough Council Draft Local Plan Proposed Submission August 2016, and the National Planning Policy Framework.

11. Notwithstanding drawing no. BMD.20.044.DR.P101 Revision C, no development above ground level of Block A or Block B shall take place until an amended front hard boundary treatment for Plot A008 and Plot B006 has been submitted to and approved in writing by the local planning authority. The approved details must be implemented prior to first occupation of Plot A008 and Plot B006

REASON: The current hard boundary treatments, by virtue of its design and height would fail to protect the living conditions of future occupiers. Amended details are required to ensure that the living conditions of the future occupier are protected, in accordance with Policy D1 of the Welwyn Hatfield District Plan 2005, Policy SADM 11 of the Welwyn Hatfield Borough Council Draft Local Plan Proposed Submission August 2016, and the National Planning Policy Framework.

12. No development above ground level of Block A, B, C, D, E and F shall take place until details of the photovoltaic (PV) cells on the roof those Blocks have been submitted and to and approved in writing by the local planning authority. The details must be metrically scaled and include:

- Elevations of PV cells;
- Elevations of each block inclusive of PV cells; and
- Roof plan of each block showing final layout of PV cells

Prior to first occupation of the development, the PV cells must be installed in accordance with the approved details and subsequently, must be permanently retained in operational use.

REASON: In the interest of environmental sustainability and high quality design, in accordance with Policies SD1 and R3 of the Welwyn Hatfield District Plan; Policies SP 1, SP 10 and SADM 13 of the Welwyn Hatfield Borough Council Draft Local Plan Proposed Submission August 2016; and the National Planning Policy Framework.

13. No development above the uppermost floor slab level of Block A, B, C, D, E and F shall take place until details of the green roof for those Blocks have been submitted and to and approved in writing by the local planning authority. The details must include:

- The type and specification of the green roof; and
- Management and maintenance plan.

The approved green roof must be carried out in the first planting and seeding seasons following first occupation of the development, and any plant which

within a period of 5 years from the completion of the development die, are removed or become seriously damaged or diseased shall be replaced in the next planting season with others of similar size and species.

The approved management and maintenance plan must be fully adhered to in perpetuity with the development.

REASON: In the interest of environmental sustainability and high quality design, in accordance with Policies SD1 and R3 of the Welwyn Hatfield District Plan; Policies SP 1, SP 10 and SADM 13 of the Welwyn Hatfield Borough Council Draft Local Plan Proposed Submission August 2016; and the National Planning Policy Framework

14. No development above ground level (other than works of demolition) shall take place until details of an external lighting scheme has been submitted to and approved in writing by the Local Planning Authority. The details must include:

- Metrically scaled elevations of the types of external lighting;
- A site plan showing the location of the external lighting; and
- Vertical lux diagrams showing potential light trespass into windows of the approved residential units and neighbouring residential properties outside of the site.

The external lighting scheme must meet the requirements within the Institution of Lighting Professionals guidance notes for the reduction of obtrusive lighting.

The approved details must be implemented prior to first occupation of the development and retained permanently thereafter.

REASON: To protect the living conditions of future occupiers and neighbouring properties in terms of light spill, in accordance with Policy R20 of the Welwyn Hatfield District Plan 2005; Policy SADM 18 of the Welwyn Hatfield Borough Council Draft Local Plan Proposed Submission August 2016, and the National Planning Policy Framework.

15. No development above ground level (other than works of demolition) shall take place until a scheme to protect future occupiers from noise due to transport sources has been submitted to and approved in writing by the Local Planning Authority, in accordance with the following requirements:

- a) Indoor ambient noise levels in living rooms and bedrooms should meet the standards within BS 8233:2014;
- b) Internal L_{Amax} levels should not exceed 45dB more than ten times a night in bedrooms;
- c) Detailed façade noise levels should be provided for all areas of the development (This can be presented in the form of a noise model);
- d) If opening windows raise the internal noise levels above those within BS8233, mechanical ventilation will need to be installed. Indoor ambient noise levels in living rooms and bedrooms must then meet the

standards within BS 8233:2014 (with the mechanical ventilation system off, on and on maximum boost setting). Also, ventilation rates are required to meet those found within The Noise Insulation Regulations 1975; and

- e) Outdoor amenity areas will need to meet the 55dB WHO Community Noise Guideline Level. If outdoor amenity areas cannot comply, then it must be shown through measurements that a suitable place is available within 5 minute walk from the development that complies with the amenity noise level.

In terms of requirements (c) and ventilation, alternative methods (such as passive systems) and rates can be considered, however, evidence that overheating will not occur will need to be provided in the form of a SAP assessment conducted with windows closed, curtains/blinds not being used, showing the required ventilation rates to ensure that the medium risk category is not exceeded. Details must be provided of the ventilation system to be installed and to demonstrate that it will provide the ventilation rates shown in the SAP Assessment.

The approved scheme must be implemented prior to first occupation of the development and must be fully adhered to in perpetuity with the development.

REASON: To ensure that intended occupiers of the development are not subject to unacceptable levels of noise due to transport sources, in accordance with Policy R19 of the Welwyn Hatfield District Plan 2005, Policy SADM 18 of the Welwyn Hatfield Borough Council Draft Local Plan Proposed Submission August 2016, and the National Planning Policy Framework.

- 16. No development above ground level (other than works of demolition) shall take place until a scheme to protect future occupiers from noise due to new plant and equipment has been submitted to and approved in writing by the local planning authority, in accordance with the following requirements:
 - a) The impact of new plant and equipment should be assessed in accordance with BS4142:2014;
 - b) If noise sources show signs of tonality, noise levels need to be 10dB below background noise level at the nearest receptor location; and
 - c) In instances where the noise source presents no tonality, the noise level need to be 5dB below the background noise level at the nearest receptor location.

The approved scheme must be implemented prior to first occupation of the development and must be fully adhered to in perpetuity with the development.

REASON: To ensure that intended occupiers of the development are not subject to unacceptable levels of noise due to plant and equipment, in accordance with Policy R19 of the Welwyn Hatfield District Plan 2005, Policy SADM 18 of the Welwyn Hatfield Borough Council Draft Local Plan Proposed Submission August 2016, and the National Planning Policy Framework.

17. No development above ground level (other than works of demolition) shall take place until a scheme to mitigate the noise from nearby commercial activities, deliveries, plant and equipment, to ensure that there will be no adverse impact to future residents, has been submitted to and approved in writing by the local planning authority. The scheme must be in accordance with the following requirements:
- a) Assessment for noise from commercial operations must be in accordance with BS4142;
 - b) If mitigation measures are required, they must ensure that indoor ambient noise levels in living rooms and bedrooms from commercial noise sources are 10dB below the standards within BS 8233:2014 and LAmax levels do not exceed 40dB internally with windows closed; and
 - c) Consideration to commercial operating hours and likelihood of commercial expansion.

The approved scheme must be implemented prior to first occupation of the development and must be fully adhered to in perpetuity with the development.

REASON: To ensure that intended occupiers of the development are not subject to unacceptable levels of noise from commercial premises, in accordance with Policy R19 of the Welwyn Hatfield District Plan 2005, Policy SADM 18 of the Welwyn Hatfield Borough Council Draft Local Plan Proposed Submission August 2016, and the National Planning Policy Framework.

18. No development above ground level (excluding demolition) shall take place until a scheme for the biodiversity enhancements in the submitted Ecological Impact Assessment & Biodiversity Net Gain report (by Green Environmental Consultants, report number: 1434/2, August 2020 – updated December 2020) including: bat roost boxes; swift nesting boxes; hedgehog hibernation/nesting boxes and commuting corridors; and insect boxes, has been submitted to and approved in writing by the local planning authority. The scheme must include:
- a) A site plan(s) and elevations identifying the location of the biodiversity enhancement features; and
 - b) Images of the type of biodiversity features to be installed.

Prior to first occupation of the development, the approved details must be implemented and retained in perpetuity.

REASON: To contribute positively to and provide net gains for biodiversity, in accordance with Policy R11 of the Welwyn Hatfield District Plan 2005, Policy SADM 16 of the Welwyn Hatfield Borough Council Draft Local Plan Proposed Submission August 2016, and the National Planning Policy Framework.

19. The development hereby permitted must be constructed in accordance with the water saving design measures of Section 3.3 of the Sustainability Statement (by Stroma Built Environment Ltd, ref. SUT10-20-84957, 18 Dec 2020) to achieve compliance with the target of 110/litres/person/day.

REASON: To improve the sustainability of dwellings, with particular regard to the efficient use of water, in accordance with Policy SADM 13 of the Welwyn Hatfield Borough Council Draft Local Plan Proposed Submission August 2016 and the National Planning Policy Framework.

PRIOR TO OCCUPATION

20. The approved soft landscaping, as shown on approved drawing numbers: BMD.20.044.DR.P302 Revision A; BMD.20.044.DR.P303 Revision A; BMD.20.044.DR.P304 Revision A; BMD.20.044.DR.P101 Revision C; BMD.20.044.DR.P102 Revision B; BMD.20.044.DR.P103 Revision B; BMD.20.044.DR.P104 Revision B; and BMD.20.044.DR.P301 Revision A, must be carried out in the first planting and seeding seasons following first occupation of the development, and any plants which within a period of 5 years from the completion of the development die, are removed or become seriously damaged or diseased shall be replaced in the next planting season with others of similar size and species. All landscape works shall be carried out in accordance with the guidance contained in British Standards 8545: 2014.

REASON: To ensure proper implementation of the agreed landscape details in the interest of high quality design, in accordance with Policies D1, D2 and D8 of the Welwyn Hatfield District Plan 2005; Policy SADM 16 of the Welwyn Hatfield Borough Council Draft Local Plan Proposed Submission August 2016; and the National Planning Policy Framework.

21. The approved hard landscaping, structures and street furniture, and boundary treatments (excluding the frontage metal railing and gate enclosure of Plot A008 and Plot B006), as shown on approved drawing numbers: BMD.20.044.DR.P101 Revision C; BMD.20.044.DR.P102 Revision B; BMD.20.044.DR.P103 Revision B; and BMD.20.044.DR.P104 Revision B, must be implemented prior to first occupation of the development and be retained permanently thereafter.

REASON: To ensure proper implementation of the agreed landscape details in the interest of high quality design, in accordance with Policies D1, D2 and D4 of the Welwyn Hatfield District Plan 2005, Policy SP 9 of the Welwyn Hatfield Borough Council Draft Local Plan Proposed Submission August 2016; and the National Planning Policy Framework.

22. The communal roof gardens must be made available for use upon first occupation of each respective Block and be retained permanently thereafter for no other purpose.

REASON: To ensure that the communal amenity space is implemented for use by future occupiers in the interest of high quality design, in accordance with Policy D1 of the Welwyn Hatfield District Plan, Policy SP 9 of the Welwyn Hatfield Borough Council Draft Local Plan Proposed Submission August 2016, and the National Planning Policy Framework.

23. Prior to the first occupation the development, vehicular access to and egress from the adjoining highway shall be limited to the access position shown on approved drawing no. ITL16195-GA-005 Rev B only which is contained in a Technical Note (by i-Transport, ref: NM/MD/ITL16195-007, 19 February 2021).

The footway / highway verge shall be reinstated in accordance with a detailed scheme to be submitted to and approved in writing by the local planning authority, prior to bringing into use the new access.

REASON: In the interest of highway safety, in accordance with Policy SADM 2 of the Welwyn Hatfield Borough Council Draft Local Plan Proposed Submission August 2016, and the National Planning Policy Framework.

24. Prior to the first occupation of the development, full details of arrangements for future management and maintenance of the proposed streets must be submitted to and approved in writing by the Local Planning Authority. The streets shall thereafter be maintained in accordance with the approved details.

REASON: To ensure roads are managed and maintained thereafter to a suitable and safe standard, in accordance with Policy SADM 2 of the Welwyn Hatfield Borough Council Draft Local Plan Proposed Submission August 2016, and the National Planning Policy Framework.

25. Prior to first occupation of the development, a metrically scaled plan showing a pedestrian and cyclist access on the northern boundary of the application site connecting with the emerging Wheat Quarter development must be submitted to and approved in writing by the local planning authority.

The approved connection must be brought into use prior to first occupation of the development and retained permanently thereafter.

REASON: To improve connectivity from the site to services and facilities in Welwyn Garden City town centre in the interest of sustainable movement, in accordance with Policies M5 and M6 of the Welwyn Hatfield District Plan 2005, Policies SP 4 and SADM 3 of the Welwyn Hatfield Borough Council Draft Local Plan Proposed Submission August 2016, and the National Planning Policy Framework.

26. Prior to first occupation of the development hereby permitted, the car parking spaces must be designated in accordance with the Parking Plans in Appendix C of the submitted Transport Assessment (by i-Transport, ref: NM/MD/AT/ITL16195-004C, 17 December 2020). The development shall include provision for at least 10% (22 spaces) of the car parking spaces to be designated for plug-in Electric Vehicles (EV) and served by EV active charging points and at least 10% (22 spaces) of the car parking spaces to be designated for passive charging. The active and passive electric vehicle charging points must be installed and made operational at the corresponding spaces.

All car parking spaces must then be retained permanently for their specific purpose in the said Parking Plans.

REASON: To promote sustainable transport in accordance with Policy SADM 12 of the Welwyn Hatfield Borough Council Draft Local Plan Proposed Submission August 2016, and the National Planning Policy Framework.

27. Prior to first occupation of the development, all cycle stores (within each block) the basement level cycle stores must be implemented in accordance with drawing numbers: AB-GA-P-B01-01 rev. PL 1, AB-GA-P-B01-02 rev. PL

1, CD-GA-P-L00 rev. PL 2; AB-GA-P-L00 rev. PL 2; E-GA-P-L00 rev. PL 2; F-GA-P-L00-L01 rev. PL 2. The type of cycle rack under drawing numbers CD-GA-P-L00 rev. PL 2 and F-GA-P-L00-L01 rev. PL 2 must be either Sheffield or Josta spaces. Thereafter, the cycle stores must be made available for use and retained permanently.

REASON: To ensure that the development is served by sufficient cycle provision and to encourage cycling as a sustainable mode of transport, in accordance with Policy M6 and M14 of the Welwyn Hatfield District Plan 2005, Policies SP 4 and SADM 3 of the Welwyn Hatfield Borough Council Draft Local Plan Proposed Submission August 2016, and the National Planning Policy Framework.

28. Prior to first occupation of the development, details of the secure cycle shelter for up to 10 bikes on drawing no. BMD.20.044.DR.P101 Revision C, must be submitted to and approved in writing by the local planning authority. The details must include:
- a) Metrically scaled elevations and roof plan of the cycle shelter; and
 - b) Confirmation of the type of cycle rack.

The approved cycle shelter must be implemented prior to first occupation of the development, be made available for use and retained permanently thereafter.

The cycle stands within the public realm on the aforementioned drawing number, must be Sheffield stands.

REASON: To ensure that sufficient visitor cycle provision is provided and to encourage cycling as a sustainable mode of transport, in accordance with Policy M6 and M14 of the Welwyn Hatfield District Plan 2005, Policies SP 4 and SADM 3 of the Welwyn Hatfield Borough Council Draft Local Plan Proposed Submission August 2016, and the National Planning Policy Framework.

29. Prior to first occupation of the development, a final Completion and Verification Report to a specification agreed and defined by the local planning authority, and signed off by an appropriate qualified person or body, which demonstrates that the sustainable urban drainage measures have been implemented as per the details approved; shall be submitted to and approved in writing by the Local Planning Authority.

It shall include the following:

- a) Provision of a Completion and Verification Report appended with substantiating evidence demonstrating the approved construction details and specifications have been implemented in accordance with the surface water drainage scheme. The verification report shall include photographs of excavations and soil profiles/horizons, installation of any surface water structure, during construction and final make up, and the control mechanism.
- b) Provision of a complete set of as built drawings for site drainage.

- c) Post-construction surveys including a CCTV survey for any underground features and piped networks.
- d) A management, maintenance and adoption plan for the SuDS features and drainage network.

REASON: To prevent the increased risk of surface water flooding, to improve and protect water quality, protect natural habitats and the amenity of residents, and ensure the future maintenance of the Sustainable Urban Drainage System in perpetuity, in accordance with Policy R7 and R11 of the Welwyn Hatfield District Plan, Policy SADM 14 of the Welwyn Hatfield Borough Council Draft Local Plan Proposed Submission August 2016, and the National Planning Policy Framework.

OTHER

- 30. Prior to the construction of the approved site access at the junction of BioPark Drive and Broadwater Road, the results of Stage 2 (Detail Design) Road Safety Audit must be submitted to an approved in writing by the local planning authority.

The site access must be constructed as approved following the approved Stage 2 (Detail Design) Road Safety Audit and be retained permanently thereafter.

REASON: To ensure satisfactory and safe access into the site, in accordance with Policy SADM 2 of the Welwyn Hatfield Borough Council Draft Local Plan Proposed Submission August 2016, and the National Planning Policy Framework.

- 31. The units marked 'WCH' in the 'type' column of the submitted Accommodation Schedule (drawing no: SC-AS rev. PL 1) must comply with Part M4(3) 'wheelchair user dwellings' of the Building Regulations 2010. All other units in this Accommodation Schedule must comply with Part M4(2) 'accessible and adaptable dwellings' of the Buildings Regulations 2010.

Written verification of compliance must be supplied to the local planning authority within 30 days of the practical completion [of the block it forms part of].

REASON: To comply with the level of accessible and adaptable housing which was applied for and to ensure that suitable housing is provided for households in need of accessible and wheelchair housing in accordance with Policies D1, and H10 of the Welwyn Hatfield District Plan 2005; Policy SP 7 of the Welwyn Hatfield Borough Council Draft Local Plan Proposed Submission August 2016, and the National Planning Policy Framework.

- 32. The undercroft parking areas for the eight townhouses (Block G) must be provided and retained in accordance with their use as annotated on drawing number: G-GA-P-L00-L01 rev. PL 1.

REASON: To ensure that sufficient car and cycle provision is provided for the occupiers of each townhouse, in accordance with in accordance with Policy M14 of the Welwyn Hatfield District Plan 2005, Policy SADM 12 of the

33. Notwithstanding the provisions of the Town and Country Planning (General Permitted Development) (England) Order 2015 (or any Order revoking or re-enacting that Order with or without modification), no development within Classes A, AA, B and E of Part 1 of Schedule 2 shall take place.

REASON: To enable the Local Planning Authority to fully consider the effects of development normally permitted by that order in the interests of residential and visual amenity in accordance with Policies D1 and D2 of the Welwyn Hatfield District Plan 2005, Policies SP 9 and SADM 11 of the Welwyn Hatfield Borough Council Draft Local Plan Proposed Submission August 2016 and the National Planning Policy Framework’.

34. In the event that contamination is found at any time when carrying out the approved development that was not previously identified it must be reported in writing immediately to the Local Planning Authority.

An investigation and risk assessment and, where remediation is necessary, a remediation scheme must then be submitted to and approved in writing by the Local Planning Authority and implemented as approved.

The Local Planning Authority must be given two weeks written notification of commencement of the remediation scheme works.

Investigation and risk assessment

The investigation and risk assessment must assess the nature and extent of any contamination on the site, whether or not it originates on the site and must be undertaken by competent persons. A written report of the findings must be produced and the findings must include:

- a) a survey of the extent, scale and nature of contamination;
- b) an assessment of the potential risks to:
 - human health;
 - property (existing or proposed) including buildings;
 - crops;
 - livestock;
 - pets;
 - woodland and service lines and pipes;
 - adjoining land;
 - groundwaters and surface waters;
 - ecological systems;
 - archeological sites and ancient monuments.
- c) an appraisal of remedial options, and proposal of the preferred option(s).

The investigation and risk assessment must be conducted in accordance with DEFRA and the Environment Agency’s ‘Model Procedures for the Management of Land Contamination, CLR 11’.

Remediation Scheme

Following completion of measures identified in the approved remediation scheme, a verification report which demonstrates the effectiveness of the remediation carried out must be submitted to and approved in writing by the local planning authority.

REASON: To ensure that risks from land contamination to the future users of the land and neighbouring land are minimised, together with those to controlled waters, property and ecological systems, and to ensure that the development can be carried out safely without unacceptable risks to workers, neighbours and other offsite receptors, in accordance with Policy R2 of the Welwyn Hatfield District Plan 2005, Policy SADM 18 of the Welwyn Hatfield Borough Council Draft Local Plan Proposed Submission August 2016, and the National Planning Policy Framework.

DRAWING NUMBERS

35. The development/works shall not be started and completed other than in accordance with the approved plans and details:

Plan Number	Revision Number	Details	Received Date
CD-GA-E-03	PL 1	Blocks C & D Courtyard Elevations	21 December 2020
CD-GA-P-L00	PL 2	Blocks C & D Ground Floor Plan	16 February 2021
CD-GA-P-L01-L04	PL 1	Blocks C & D First to Fourth Floor Plan	21 December 2020
CD-GA-P-L05	PL 1	Blocks C & D Fifth Floor Plan	21 December 2020
CD-GA-P-L06	PL 1	Blocks C & D Sixth Floor Plan	21 December 2020
CD-GA-P-L07	PL 1	Blocks C & D Seventh Floor Plan	21 December 2020
CD-GA-P-R08	PL 1	Blocks C & D Roof Plan	21 December 2020
CD-GA-S-01	PL 1	Blocks C & D Sections	21 December 2020
CD-GA-S-02	PL 1	Blocks C & D Sections	21 December 2020
AB-GA-E-01	PL 1	Blocks A & B Elevations	21 December 2020
AB-GA-E-02	PL 1	Blocks A & B Elevations	21 December 2020

AB-GA-E-03	PL 1	Blocks A & B Courtyard Elevations	21 December 2020
AB-GA-P-B01-01	PL 1	Blocks A & B Basement L01 Plan 01	21 December 2020
AB-GA-P-B01-02	PL 1	Blocks A & B Basement L01 Plan 02	21 December 2020
AB-GA-P-B02	PL 1	Blocks A & B Basement L02 Plan	21 December 2020
AB-GA-P-L00	PL 2	Blocks A & B, Ground Floor Plan	16 February 2020
AB-GA-P-L01-L05	PL 1	Blocks A & B First to Fifth Floor Plan	21 December 2020
AB-GA-P-L06	PL 1	Blocks A & B Sixth Floor Plan	21 December 2020
AB-GA-P-L07	PL 1	Blocks A & B, Seventh Floor Plan	21 December 2020
AB-GA-P-L08	PL 1	Blocks A & B Eighth Floor Plan	21 December 2020
AB-GA-P-R09	PL 1	Blocks A & B Roof Plan	21 December 2020
AB-GA-S-01	PL 1	Blocks A & B - Section Sheet 01	21 December 2020
AB-GA-S-02	PL 1	Blocks A & B - Section Sheet 02	21 December 2020
CD-GA-E-01	PL 1	Blocks C & D Elevations Sheet 01	21 December 2020
CD-GA-E-02	PL 1	Blocks C & D Elevations Sheet 02	21 December 2020
S-GA-E-01	PL 1	Proposed North Site Elevation	21 December 2020
S-GA-E-02	PL 1	Proposed East Site Elevation	21 December 2020
S-GA-E-03	PL 1	Proposed South Site Elevation	21 December 2020
S-GA-E-04	PL 1	Proposed West Site Elevation	21 December 2020
E-GA-E-01	PL 1	Block E Elevations Sheet 01	21 December 2020
E-GA-P-L00	PL 2	Block E Ground Floor Plan	16 February 2021

E-GA-P-L01	PL 1	Block E First Floor Plan	21 December 2020
E-GA-P-L02-L04	PL 1	Block E, Second to Fourth Floor Plan	21 December 2020
E-GA-P-L05	PL 1	Block E Fifth Floor Plan	21 December 2020
E-GA-P-L06	PL 1	Block E Sixth Floor Plan	21 December 2020
E-GA-P-R07	P 1	Block E Roof Plan	21 December 2020
E-GA-S-01	P 1	Block E, Sections, Sheet 01	21 December 2020
E-GA-S-02	P 1	Block E Sections Sheet 02	21 December 2020
F-GA-E-01	PL 1	Block F Elevations Sheet 01	21 December 2020
F-GA-P-L00-L01	PL 2	Block F Ground and First Floor Plan	16 February 2021
F-GA-P-L02-L03	PL 1	Block F Second and Third Floor Plans	21 December 2020
F-GA-P-R04	PL 1	Block F Roof Plan	21 December 2020
F-GA-S-01	PL 1	Block F Sections Sheet 01	21 December 2020
GA-EX-L00-OS	PL 1	Location Plan	21 December 2020
GA-LS-01	PL 1	Proposed Long Section 01	21 December 2020
GA-LS-02	PL 1	Proposed Long Section 02	21 December 2020
GA-SP-B01	PL 1	Proposed Site Plan Basement Level 01	21 December 2020
GA-SP-B02	PL 1	Proposed Site Plan Basement Level 02	21 December 2020
GA-SP-L00	PL 2	Proposed Site Plan Ground Floor	16 February 2021
GA-SP-L01	PL 2	Proposed Site Plan First Floor	16 February 2021
GA-SP-L02	PL 1	Proposed Site Plan Second Floor	21 December 2021
GA-SP-L03	PL 1	Proposed Site Plan Third Floor	21 December 2021
GA-SP-L04	PL 1	Proposed Site Plan Fourth Floor	21 December 2020
GA-SP-L05	PL 1	Proposed Site Plan Fifth Floor	21 December 2020

GA-SP-L06	PL 1	Proposed Site Plan Sixth Floor	21 December 2020
GA-SP-L07	PL 1	Proposed Site Plan Seventh Floor	21 December 2020
GA-SP-L08	PL 1	Proposed Site Plan Eighth Floor	21 December 2020
GA-SP-L09	PL 1	Proposed Site Plan Roof Level	21 December 2020
GA-SP-M	PL 1	Site Plan Masterplan	21 December 2020
GA-SP-N	PL 1	Proposed Site Location Plan	21 December 2020
G-GA-E-01	PL 1	Block G, Elevations, Section 01	21 December 2020
G-GA-P-L00-L01	PL 1	Block G Ground and First Floor Plans	21 December 2020
G-GA-P-L02-R03	PL 1	Block G Second Floor and Roof Plans	21 December 2020
G-GA-S-01	PL 1	Block G, Sections, Sheet 01	21 December 2020
BG-EX-L09		Building 33 Existing Fourth Floor Plan	21 December 2020
BG-EX-L07		Building 33 Existing Second Floor Plan	21 December 2020
BG-EX-L08		Building 33 Existing Third Floor Plan	21 December 2020
BG-EX-L05		Buildings 33, 34 & 35 Existing Ground Floor Plans	21 December 2020
BG-EX-L06		Buildings 33 & 35 Existing First Floor Plans	21 December 2020
BG-EX-B01		Building 30 Existing Basement Plan	21 December 2020
BG-EX-L01		Building 30 Existing First Floor Plan	21 December 2020
BG-EX-L04		Building 30 Existing Fourth Floor Plan	21 December 2020
BG-EX-L00		Building 30 Existing Lower Ground and Ground Floor Plans	21 December 2020
BG-EX-L02		Building 30 Existing	21 December 2020

Second Floor Plan

BG-EX-L03		Building 30 Existing Third Floor Plan	21 December 2020
BMD.20.044 .DR.P302	A	Planting Plan – Ground Floor (Sheet 2 of 2)	21 December 2020
BMD.20.044 .DR.P303	A	Planting Plans – Roof Gardens (Sheet 1 of 2)	21 December 2020
BMD.20.044 .DR.P304	A	Planting Plans – Roof Gardens (Sheet 2 of 2)	21 December 2020
BMD.20.044 .DR.P401	A	Landscape Sections (Sheet 1 of 3)	21 December 2020
BMD.20.044 .DR.P402	A	Landscape Sections (Sheet 2 of 3)	21 December 2020
BMD.20.044 .DR.P403	A	Landscape Sections (Sheet 3 of 3)	21 December 2020
BMD.20.044 .DR.P101	C	Detailed General Arrangement – Ground Floor (Sheet 1 of 2)	02 July 2021
BMD.20.044 .DR.P102	B	Detailed General Arrangement – Ground Floor (Sheet 2 of 2)	02 July 2021
BMD.20.044 .DR.P103	B	Detailed General Arrangement – Roof Gardens (Sheet 1 of 2)	02 July 2021
BMD.20.044 .DR.P104	B	Detailed General Arrangement – Roof Gardens (Sheet 2 of 2)	02 July 2021
BMD.20.044 .DR.P301	A	Planting Plans – Ground Floor (Sheet 1 of 2)	21 December 2020
41949-01-1	A	Topographical Survey	21 December 2020
41949-01-2	A	Topographical Survey	21 December 2020
41949-01-3	A	Topographical Survey	21 December 2020
41949F-01	A	Sub Basement Floor Plan	21 December 2020
41949F-02	A	Basement Floor Plan	21 December 2020
L 9989/1-6	0	Existing Elevations 6	21 December 2020
L 9989/1-7	0	Existing Elevations 7	21 December 2020
L9989/1-8	0	Existing Elevations 8	21 December 2020
L9989/1-9	0	Existing Elevations 9	21 December 2020

L9989/1-10	0	Existing Elevations 10	21 December 2020
L9989/1-1	0	Existing Elevations 1	21 December 2020
L9989/1-2	0	Existing Elevations 2	21 December 2020
L9989/1-3	0	Existing Elevations 3	21 December 2020
L9989/1-4	0	Existing Elevations 4	21 December 2020
L9989/1-5	0	Existing Elevations 5	21 December 2020
104		Existing Sections	21 December 2020
BMD.20.044 .DR.P001	C	Overall General Arrangement Plan	21 December 2020
BMD.20.044 .DR.P002		Landscape Masterplan	21 December 2020

REASON: To ensure that the development is carried out in accordance with the approved plans and details.

POSITIVE AND PROACTIVE STATEMENT

The decision has been made taking into account, where practicable and appropriate the requirements of paragraph 38 of the National Planning Policy Framework and material planning considerations do not justify a decision contrary to the development plan.

INFORMATIVES

1. This permission does not convey any consent which may be required under any legislation other than the Town and Country Planning Acts. Any permission required under the Building Regulations or under any other Act, must be obtained from the relevant authority or body e.g. Fire Officer, Health and Safety Executive, Environment Agency (water interest etc.) Neither does this permission negate or override any private covenants or legal interest (easements or wayleaves) which may affect the land.
2. In addition, and separate to your planning permission, for the majority of schemes, you are required by law to appoint a building regulator who will inspect your property at various stages during the course of your building project. This is to ensure it is compliant with the Building Regulations and the Building Act 1984.

The checks the building regulator will carry out include, but are not limited to, the structure, foundations, fire precautions and escape routes, electrical and plumbing compliance and other issues such as drainage and insulation. The objective of these checks is to ensure that your building is safe to live in, accessible and environmentally sustainable.

Once all build stages are checked and the works are finished, a Completion Certificate is issued confirming that these objectives have been met. You will also need the Completion Certificate, should you sell the property, as it will confirm to future owners that the work has been carried out in compliance with the Regulations.

As the owner of the property, you are responsible for Building Regulations compliance so we would urge you to decide which regulator to use, as opposed to leaving your builder or architect to make the choice. This is so that you can be sure the building regulator is truly independent and working to protect you from any breach or omission during the works.

Hertfordshire Building Control Limited are a Company wholly owned by eight local authorities in Hertfordshire including Welwyn Hatfield Borough Council. Please contact them on 01438 879990 or at buildingcontrol@hertfordshirebc.co.uk to discuss the process and all that is involved. Or alternatively refer to the Homeowner Information section on their website at www.hertfordshirebc.co.uk

3. The development will involve the numbering of properties and/or the naming of new streets. The applicant MUST contact Welwyn Hatfield Borough Council, Environmental Services (01707 357 000) before any name or number is proposed. This is a requirement of the Public Health Act 1875 and Public Health (Amendment) Act 1907.
4. Cadent Gas have identified that a low or medium pressure (below 2 bar) gas pipes and associated equipment are located in the vicinity of the proposed development. Please contact Cadent Gas on plantprotection@cadentgas.com or +44 (0)800 688588 to discuss your requirements before carrying out any work.
5. There are potentially water mains running through or near to part of proposed development site. If the development goes ahead as proposed, the developer will need to get in contact with our Developer Services Team to discuss asset protection or diversionary measures. This can be done through the My Developments Portal (<https://affinitywater.custhelp.com/>) or aw_developerservices@custhelp.com.

In this location Affinity Water will supply drinking water to the development. To apply for a new or upgraded connection, please contact our Developer Services Team by going through their My Developments Portal (<https://affinitywater.custhelp.com/>) or aw_developerservices@custhelp.com. The Team also handle C3 and C4 requests to cost potential water mains diversions. If a water mains plan is required, this can also be obtained by emailing maps@affinitywater.co.uk. Please note that charges will apply. It is advised that this is done as soon as possible to avoid delays in servicing the new development.

6. In relation to the protection of the railway, the developer must liaise with Network Rail's Asset Protection Team prior to the construction phase to discuss the scheme, to ensure that it can be delivered safely, and without detrimental impact on the safety of the adjacent railway environment. Issues to be discussed and agreed will include (but not necessarily be limited to) construction methodology, use of scaffolding, use of crane and plant, boundary treatments (including landscaping and anti-trespass provision where appropriate) and drainage. Generally if excavations/piling/buildings are to be located within 10m of the railway boundary a method statement should be submitted for Network Rail approval.

All operations, including the use of cranes or other mechanical plant working adjacent to Network Rail's property, must at all times be carried out in a "fail safe" manner such that in the event of mishandling, collapse or failure, no materials or plant are capable of falling within 3.0m of the nearest rail of the adjacent railway line, and where the railway is electrified, within 3.0m of overhead electrical equipment or supports.

All excavations/ earthworks carried out in the vicinity of Network Rail property/ structures must be designed and executed such that no interference with the integrity of that property/ structure can occur. If temporary works compounds are to be located adjacent to the operational railway, these should be included in a method statement for approval by Network Rail. Prior to commencement of works, full details of excavations and earthworks to be carried out near the railway undertaker's boundary fence should be submitted for the approval of the Local Planning Authority acting in consultation with the railway undertaker and the works shall only be carried out in accordance with the approved details. Where development may affect the railway, consultation with the Asset Protection Project Manager should be undertaken. Network Rail will not accept any liability for any settlement, disturbance or damage caused to a development by failure of the railway infrastructure nor for any noise or vibration arising from the normal use and/or maintenance of the operational railway. No right of support is given or can be claimed from Network Rail's infrastructure or railway land.

Security of the railway boundary will need to be maintained at all times. If the works require temporary or permanent alterations to the mutual boundary the applicant must contact Network Rail's Asset Protection Project Manager.

Demolition and/or refurbishment works must not be carried out on the development site that may endanger the safe operation of the railway, or the stability of the adjoining Network Rail structures. The demolition of buildings or other structures must be carried out in accordance with an agreed method statement. Approval of the method statement must be obtained from Network Rail's Asset Protection Project Manager before the development can commence.

Where vibro-compaction machinery is to be used in development, details of the use of such machinery and a method statement should be submitted for the approval of the Local Planning Authority acting in consultation with the railway undertaker prior to the commencement of works and the works shall only be carried out in accordance with the approved method statement.

Given the scale of the development it is likely use of a crane will be required. The developer must bear in mind that crane usage adjacent to railway infrastructure is subject to stipulations on size, capacity etc. which needs to be agreed by the Asset Protection Project Manager prior to implementation.

All roads, paths or ways providing access to any part of the railway undertaker's land shall be kept open at all times during and after the development.

7. Storage of materials: The applicant is advised that the storage of materials associated with the construction of this development should be provided within the site on land which is not public highway, and the use of such areas must not interfere with the public highway. If this is not possible, authorisation should be sought from the Highway Authority before construction works commence.

Further information is available via the website <https://www.hertfordshire.gov.uk/services/highways-roads-and-pavements/business-and-developer-information/business-licences/business-licences.aspx> or by telephoning 0300 1234047.

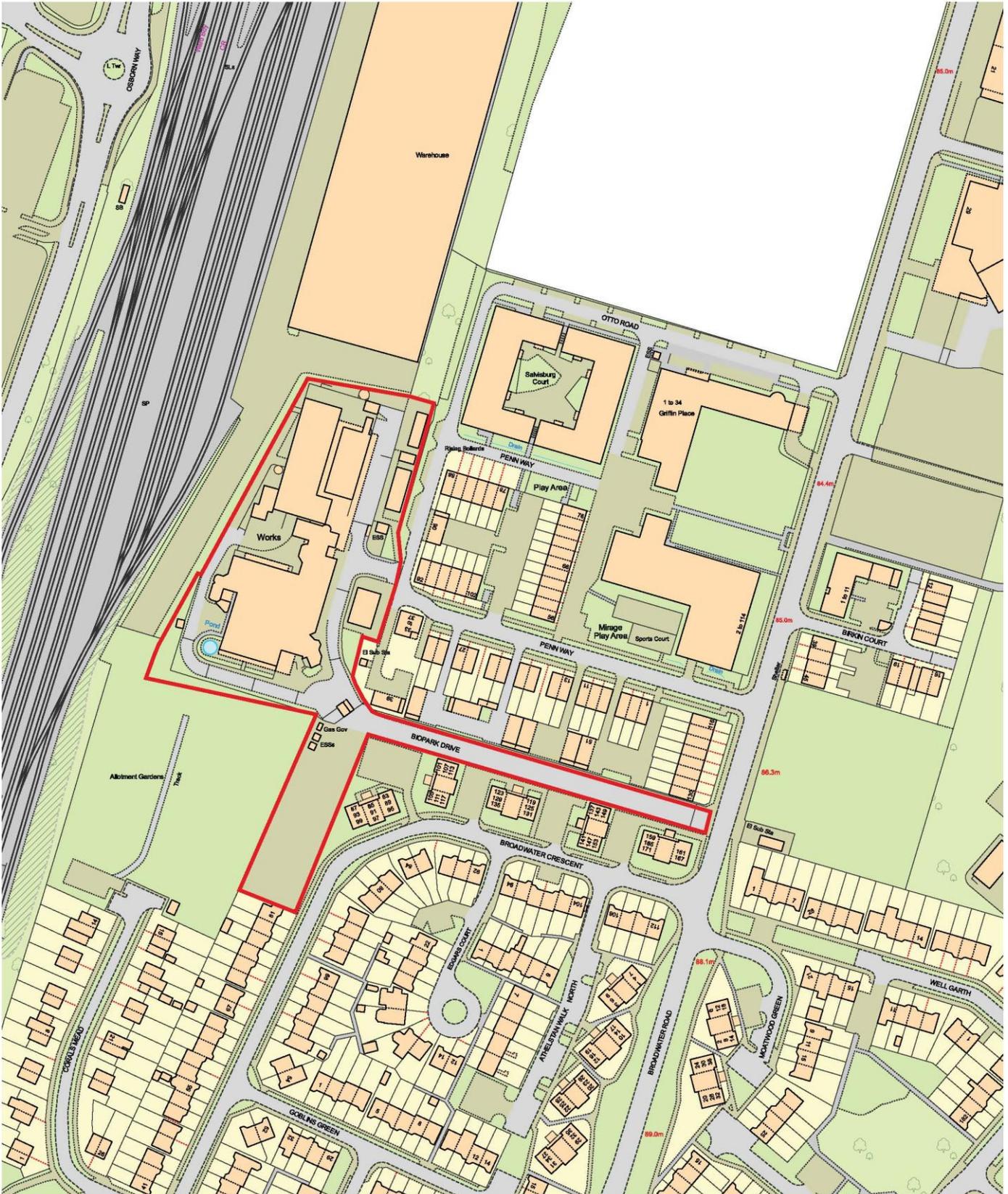
8. Obstruction of public highway land: It is an offence under section 137 of the Highways Act 1980 for any person, without lawful authority or excuse, in any way to wilfully obstruct the free passage along a highway or public right of way. If this development is likely to result in the public highway or public right of way network becoming routinely blocked (fully or partly) the applicant must contact the Highway Authority to obtain their permission and requirements before construction works commence. Further information is available via the website <https://www.hertfordshire.gov.uk/services/highways-roads-and-pavements/business-and-developer-information/business-licences/business-licences.aspx> or by telephoning 0300 1234047.

9. Road Deposits: It is an offence under section 148 of the Highways Act 1980 to deposit mud or other debris on the public highway, and section 149 of the same Act gives the Highway Authority powers to remove such material at the expense of the party responsible. Therefore, best practical means shall be taken at all times to ensure that all vehicles leaving the site during construction of the development are in a condition such as not to emit dust or deposit mud, slurry or other debris on the highway. Further information is available via the website <https://www.hertfordshire.gov.uk/services/highways-roads-and-pavements/highways-roads-and-pavements.aspx> or by telephoning 0300 1234047.

10. Construction standards for 278 works within the highway: The applicant is advised that in order to comply with this permission it will be necessary for the developer of the site to enter into an agreement with Hertfordshire County Council as Highway Authority under Section 278 of the Highways Act 1980 to ensure the satisfactory completion of the access and associated road improvements. The construction of such works must be undertaken to the satisfaction and specification of the Highway Authority, and by a contractor who is authorised to work in the public highway. Before works commence the applicant will need to apply to the Highway Authority to obtain their permission and requirements. Further information is available via the website <https://www.hertfordshire.gov.uk/services/highways-roads-and-pavements/business-and-developer-information/development-management/highways-development-management.aspx> or by telephoning 0300 1234047.

David Elmore (Development Management)

Date: 27/08/2021



 <p>WELWYN HATFIELD</p> <p>Council Offices, The Campus Welwyn Garden City, Herts, AL8 6AE</p>	BIOPARK BROADWATER ROAD WELWYN GARDEN CITY AL7 3AX		Scale: DNS
			Date: 02-08-2021
Development Management Committee	6/2020/3420/MAJ	Drawn: C Gooding-Williams	
© Crown Copyright. All rights reserved Welwyn Hatfield Borough Council LA100019547 2021			

This page is intentionally left blank

**Director of Environment &
Infrastructure: Mark Kemp**



Welwyn Hatfield Borough Council
The Campus
Welwyn Garden City
Hertfordshire
AL8 6AW

Hertfordshire County Council
Growth & Infrastructure Unit
Environment & Infrastructure Department
County Hall
Hertford
Hertfordshire
SG13 8DN

Respond to: growth@hertfordshire.gov.uk

Planning Application: 6/2020/3420/MAJ
Date: 4 February 2021

Dear Planning Officer

Fire Hydrants Response to demolition of existing buildings and construction of 289 residential units (use Class C3) and community hub (use Class E/F 2) with public realm and open space, landscaping, access, associated car and cycle parking, refuse and recycling storage and supporting infrastructure at Biopark Broadwater Road Welwyn Garden City AL7 4AX

I refer to the above mentioned application and am writing in respect of planning obligations sought by the County Council towards fire hydrants to minimise the impact of development on Hertfordshire County Council Services for the local community. Please note that this does not cover all Hertfordshire Property Services and we may contact you under combined separate cover regarding a specific and demonstrated need for early years provision, primary education, secondary education, library, youth, waste and adult care services.

Based on the information provided to date we would seek the provision of fire hydrant(s), as set out within HCC's Planning Obligations Toolkit. All developments must be adequately served by fire hydrants in the event of fire. The County Council as the Statutory Fire Authority has a duty to ensure fire fighting facilities are provided on new developments. HCC therefore seek the provision of hydrants required to serve the proposed buildings by the developer through standard clauses set out in a Section 106 legal agreement or unilateral undertaking. Buildings fitted with fire mains must have a suitable hydrant provided and sited within 18m of the hard-standing facility provided for the fire service pumping appliance.

The requirements for fire hydrant provision are set out with the Toolkit at paragraph 12.33 and 12.34 (page 22). In practice, the number and location of hydrants is determined at the time the water services for the development are planned in detail and the layout of the development is known, which is usually after planning permission is granted. If, at the water scheme design stage, adequate hydrants are already available no extra hydrants will be needed.

Section 106 planning obligation clauses can be provided on request.

Justification

Fire hydrant provision based on the approach set out within the Planning Obligations Guidance - Toolkit for Hertfordshire (Hertfordshire County Council's requirements) document, which was approved by Hertfordshire County Council's Cabinet Panel on 21 January 2008 and is available via the following link: www.hertfordshire.gov.uk/planningobligationstoolkit

The County Council seeks fire hydrant provisions for public adoptable fire hydrants and not private fire hydrants. Such hydrants are generally not within the building site and are not covered by Part B5 of the Building Regulations 2010 as supported by Secretary of State Guidance "Approved Document B".

In respect of Regulation 122 of the CIL Regulations 2010 the planning obligations sought from this proposal are:

(i) Necessary to make the development acceptable in planning terms.

Recognition that contributions should be made to mitigate the impact of development are set out in planning related policy documents. The NPPF states "Local planning authorities should consider whether otherwise unacceptable development could be made acceptable through the use of conditions or planning obligations. Conditions cannot be used cover the payment of financial contributions to mitigate the impact of a development (Circular 11/95: Use of conditions in planning permission, paragraph 83).

All developments must be adequately served by fire hydrants in the event of fire. The County Council as the Statutory Fire Authority has a duty to ensure fire fighting facilities are provided on new developments. The requirements for fire hydrant provision are set out with the Toolkit at paragraph 12.33 and 12.34 (page 22).

(ii) Directly related to the development;

Only those fire hydrants required to provide the necessary water supplies for fire fighting purposes to serve the proposed development are sought to be provided by the developer. The location and number of fire hydrants sought will be directly linked to the water scheme designed for this proposal.

(iii) Fairly and reasonable related in scale and kind to the development.

Only those fire hydrants required to provide the necessary water supplies for fire fighting purposes to serve the proposed development are sought to be provided by the developer. The location and number of fire hydrants sought will be directly linked to the water scheme designed for this proposal.

I would be grateful if you would keep me informed about the progress of this application so that either instructions for a planning obligation can be given promptly to our legal team if your authority is minded to grant consent or, in the event of an appeal, information can be submitted in support of the requested provision. Should you require any further information please do not hesitate to contact the Growth & Infrastructure Unit.

Yours faithfully

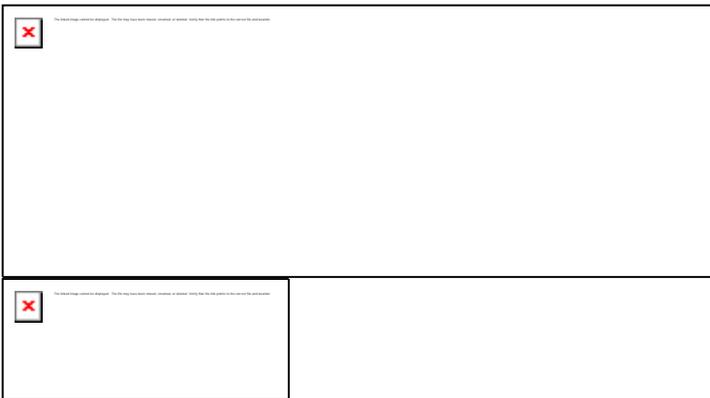
Sarah Burgess
Growth & Infrastructure Officer

From: Sarah Burgess <Sarah.Burgess@hertfordshire.gov.uk>
Sent: 05 February 2021 12:07
To: Clare Howe; Planning
Cc: Trish Lyons
Subject: Biopark, Broadwater Road, Welwyn Garden City 6/2020/3420/MAJ

Good morning Clare

Response by HCC's Growth & Infrastructure Unit to **Application Reference Application Reference: 6/2020/3420/MAJ Proposed development at: Biopark Broadwater Road Welwyn Garden City AL7 3AX Proposal: Demolition of existing buildings and construction of 289 residential units (Use Class C3) and community hub (Use Class E/F.2), with public realm and open space, landscaping, access, associated car and cycle parking, refuse and recycling storage and supporting infrastructure.**

I am writing in respect of planning obligations sought towards education, library and youth services to minimise the impact of development on Hertfordshire County Council Services for the local community. Based on the information to date for the development of **289** dwellings, we would seek financial contributions towards the following projects: Pupil yield and indicative levels of contributions have been calculated using the development mix and trajectory set out below:



Primary Education

HCC can confirm that there is insufficient spare primary education capacity in the area. Therefore HCC are seeking a primary education contribution from this development. This should be through proportionate contributions towards the new 3FE Peartree Primary School.

The recent DfE guidance (Securing developer contributions for education, Nov 2019) is clear that when calculating the cost of education provision the assumed cost of mainstream school places should be based on the national average costs published in the DfE school place scorecards. The DfE scorecard costs can be found at the following link – <https://www.gov.uk/government/statistics/local-authority-school-places-scorecards-2019>. Based on the DfE scorecard the cost of a new 3FE primary school (including nursery provision) is £13,842,900.

Based on the development mix set out above, the forms of entry of primary aged pupils (including nursery places) modelled to arise from the development (based on the Hertfordshire Demographic Model) is **0.19 FE**. This is 6.3% of the capacity of the new 3FE primary school (0.19FE/3FE).

Therefore, the primary education contributions (which include the cost of nursery provision at the new primary school) which are sought from this development are **£872,102** (£13,842,900 x 6.3%). These are based on costs as of 1Q2020 (BCIS All in TPI) so indexation will need to be applied from this date.

Secondary Education towards the expansion of Ridgeway Academy from 7 form of entry to 8 forms of entry (**£138,694 this is based on Table 2 below index linked to PUBSEC 175**)

Nursery Education provision provided at the new 3FE Peartree Primary School

Childcare Service provision provided at the new 3FE Peartree Primary School (**£12,200 this is based on Table 2 below index linked to PUBSEC 175**)

Library Service towards increasing the capacity at Welwyn Garden City Library (**£31,952 this is based on Table 2 below index linked to PUBSEC 175**)

Youth Service towards Increased capacity at the Welwyn Garden City Young People’s Centre or its re-provision (£3,668 this is based on Table 2 below index linked to PUBSEC 175)

Waste Services:

A contribution towards the development of the Tewin Road Recycling Centre is sought from this development. Cost of Tewin Rd development: £6,500,000 (These are based on costs as of 3Q2020 (BCIS All in TPI) so indexation will need to be applied from this date)

Contribution sought per dwelling: £124.23

Number of new homes at this development: 289

Total contribution sought from this development : 289 x 124.23 = **£35,902**.

Although the likely levels of contributions have been provided in this email it is important to note that those based on the Table 2 costs (secondary, childcare, youth and library services) are only indicative figures. Therefore HCC require mechanisms to be included in the legal agreement such that these contributions are based on the development mix that comes forward and if the number or mix of dwellings was to change then the level of contribution could easily be recalculated and without the need to enter into a Deed of Variation.

In order to facilitate this and enable a formulaic approach to be applied the contributions for |Secondary Childcare, Youth facilities and Library facilities have been set out by type, tenure and size of dwellings (in the form of Table 2 of the HCC Toolkit). These are as follows:

Table 2: Hertfordshire County Council Services planning obligations contributions table

Bedrooms*	1	2	3	4	5+	1	2	3
	HOUSES Market & other					FLATS Market & other		
Secondary education	£263	£802	£2,561	£4,423	£5,662	£47	£444	£1,677
Childcare	£14	£64	£138	£199	£244	£8	£57	£89
Youth facilities	£6	£16	£50	£82	£105	£3	£13	£41
Library facilities	£98	£147	£198	£241	£265	£77	£129	£164
	HOUSES Social Rent					FLATS Social Rent		
Secondary education	£62	£450	£1,676	£2,669	£2,405	£14	£261	£1,084
Childcare	£12	£121	£188	£226	£277	£4	£65	£113
Youth facilities	£2	£8	£31	£51	£55	£1	£6	£21
Library facilities	£48	£91	£130	£156	£155	£38	£82	£107

*uses an assumed relationship between bedrooms and habitable rooms All figures are subject to indexation and will be indexed using the PUBSEC index base figure 175

The CIL Regulations discourage the use of formulae to calculate contributions however, the County Council is not able to adopt a CIL charge itself. Accordingly, in areas where a CIL charge has not been introduced to date, planning obligations in their restricted form are the only route to address the impact of a development. In instances where a development is not large enough to require on site provision but is large enough to generate an impact on a particular service, an evidenced mechanism is needed to form the basis of any planning obligation sought. HCC views the calculations and figures set out within the Toolkit as appropriate base costs for the obligations sought in this instance.

HCC’s standard approach is to request Table 2 of the Toolkit (below) is referred to and included within any Section 106 deed. This approach provides the certainty of identified contribution figures with the flexibility for an applicant/developer to amend the dwelling mix at a later stage and the financial contribution to be calculated accordingly. This ensures the contributions remain appropriate to the development and thereby meet the third test of Regulation 122 of the Community Infrastructure Levy Regulations 2010 (amended 2019): “fairly and reasonably relates in scale and kind to the development”.

Please note that current service information for the local area may change over time and projects to improve capacity may evolve. This may potentially mean a contribution towards other services could be required at the time any application is received in respect of this site.

Justification

The above primary education requirements have been calculated using the national average costs per place published in the DfE school place scorecards, available via the following link

<https://www.gov.uk/government/statistics/local-authority-school-places-scorecards-2019>. Whilst the amounts and approach set out within the Planning Obligations Guidance - Toolkit for Hertfordshire (Hertfordshire County Council's requirements) document, which was approved by Hertfordshire County Council's Cabinet Panel on 21 January 2008 and is available via the following link: www.hertfordshire.gov.uk/planningobligationstoolkit, have been used for calculating the other requirements.

In respect of Regulation 122 of the CIL Regulations 2010 (amended 2019), the planning obligations sought from this proposal are:

(i) Necessary to make the development acceptable in planning terms.

Recognition that contributions should be made to mitigate the impact of development are set out in planning related policy documents. The NPPF states "Local planning authorities should consider whether otherwise unacceptable development could be made acceptable through the use of conditions or planning obligations." Conditions cannot be used cover the payment of financial contributions to mitigate the impact of a development (Circular 11/95: Use of conditions in planning permission, paragraph 83). In addition, for education requirements, paragraph 94 of Section 8 of the NPPF states: " It is important that a sufficient choice of school places is available to meet the needs of existing and new communities. Local planning authorities should take a proactive, positive and collaborative approach to meeting this requirement, and to development that will widen choice in education." The development plan background supports the provision of planning contributions. The provision of community facilities is a matter that is relevant to planning. The contributions sought will ensure that additional needs brought on by the development are met.

(ii) Directly related to the development;

The occupiers of new residential developments will have an additional impact upon local services. The financial contributions sought towards the above services are based on the size, type and tenure of the individual dwellings comprising this development following consultation with the Service providers and will only be used towards services and facilities serving the locality of the proposed development and therefore, for the benefit of the development's occupants.

(iii) Fairly and reasonably related in scale and kind to the development.

The above financial contributions have been calculated according to the size, type and tenure of each individual dwelling comprising the proposed development (based on the person yield).

I would be grateful if you would keep me informed about the progress of this application so that either instruction for a planning obligation can be given promptly if your authority is minded to grant consent or, in the event of an appeal, information can be submitted in support of the requested financial contributions and provisions.

Kind regards

Sarah



Sarah Burgess
Growth & Infrastructure Officer | Growth and Infrastructure Unit | Environment and Infrastructure
Hertfordshire County Council
County Hall, Pegs Lane, Hertford, SG13 8DE, Postal Point: CHN114
T: 01992 588303 (**Internal:28303**)
E: sarah.burgess@hertfordshire.gov.uk



****Disclaimer****

The information in this message should be regarded as confidential and is intended for the addressee only unless explicitly stated. If you have received this message in error it must be deleted and the sender notified. The views expressed in this message are personal and not necessarily those of Hertfordshire County Council unless explicitly stated. Please be aware that emails sent to or received from Hertfordshire County Council may be intercepted and read by the council. Interception will only occur to ensure compliance with council policies or procedures or regulatory obligations, to prevent or deter crime, or for the purposes of essential maintenance or support of the email system.

David Elmore

Subject: FW: UPDATED RESPONSE- 6/2020/3420/MAJ-Biopark Broadwater Road WGC
Importance: High

From: Sarah Burgess [mailto:Sarah.Burgess@hertfordshire.gov.uk]
Sent: 31 August 2021 15:57
To: David Elmore <d.elmore@welhat.gov.uk>
Cc: Trish Lyons <Trish.Lyons@hertfordshire.gov.uk>
Subject: UPDATED RESPONSE- 6/2020/3420/MAJ-Biopark Broadwater Road WGC
Importance: High

Good Afternoon David

Many thanks for providing the correct development mix, please see response by HCC's Growth & Infrastructure Unit to **Application Reference Application Reference: 6/2020/3420/MAJ Proposed development at: Biopark Broadwater Road Welwyn Garden City AL7 3AX Proposal: Demolition of existing buildings and construction of 289 residential units (Use Class C3) and community hub (Use Class E/F.2), with public realm and open space, landscaping, access, associated car and cycle parking, refuse and recycling storage and supporting infrastructure.** I am writing in respect of planning obligations sought towards education, library and youth services to minimise the impact of development on Hertfordshire County Council Services for the local community. Based on the information to date for the development of **289** dwellings, we would seek financial contributions towards the following projects: Pupil yield and indicative levels of contributions have been calculated using the development mix provided in your emailed dated 26th August 2021, see below:

HOUSES

FLATS

Tenure	A) Affordable Rent ONLY	B) Open market & intermediate (inc shared ownership)
Number of bedrooms		
1		
2		
3		
4		8
5+		
Total	0	8

Tenure	A) Affordable Rent ONLY	B) Open Market & Intermediate (inc shared owndershi)
Number of bedrooms		
1		129
2		126
3		26
Total	0	281

Primary Education

HCC can confirm that there is insufficient spare primary education capacity in the area. Therefore HCC are seeking a primary education contribution from this development. This should be through proportionate contributions towards the new 3FE Peartree Primary School.

The recent DfE guidance (Securing developer contributions for education, Nov 2019) is clear that when calculating the cost of education provision the assumed cost of mainstream school places should be based on the national average costs published in the DfE school place scorecards. The DfE scorecard costs can be found at the following link – <https://www.gov.uk/government/statistics/local-authority-school-places-scorecards-2019>. Based on the DfE scorecard the cost of a new 3FE primary school (including nursery provision) is £13,842,900.

Based on the development mix set out above, the forms of entry of primary aged pupils (including nursery places) modelled to arise from the development (based on the Hertfordshire Demographic Model) is **0.18 FE**. This is 6% of the capacity of the new 3FE primary school (0.18FE/3FE).

Therefore, the primary education contributions (which include the cost of nursery provision at the new primary school) which are sought from this development are **£830,574** (£13,842,900 x 6%). These are based on costs as of 1Q2020 (BCIS All in TPI) so indexation will need to be applied from this date.

Secondary Education towards the expansion of Ridgeway Academy from 7 form of entry to 8 forms of entry (£140,993 this is based on Table 2 below index linked to PUBSEC 175)

Nursery Education provision provided at the new 3FE Peartree Primary School

Childcare Service provision provided at the new 3FE Peartree Primary School (£12,120 this is based on Table 2 below index linked to PUBSEC 175)

Library Service towards increasing the capacity at Welwyn Garden City Library (£32,379 this is based on Table 2 below index linked to PUBSEC 175)

Youth Service towards Increased capacity at the Welwyn Garden City Young People’s Centre or its re-provision (£3,747 this is based on Table 2 below index linked to PUBSEC 175)

Waste Services:

A contribution towards the development of the Tewin Road Recycling Centre is sought from this development. Cost of Tewin Rd development: £6,500,000 (These are based on costs as of 3Q2020 (BCIS All in TPI) so indexation will need to be applied from this date)

Contribution sought per dwelling: £124.23

Number of new homes at this development: 289

Total contribution sought from this development : 289 x 124.23 = **£35,902**.

Although the likely levels of contributions have been provided in this email it is important to note that those based on the Table 2 costs (secondary, childcare, youth and library services) are only indicative figures. Therefore HCC require mechanisms to be included in the legal agreement such that these contributions are based on the development mix that comes forward and if the number or mix of dwellings was to change then the level of contribution could easily be recalculated and without the need to enter into a Deed of Variation.

In order to facilitate this and enable a formulaic approach to be applied the contributions for |Secondary Childcare, Youth facilities and Library facilities have been set out by type, tenure and size of dwellings (in the form of Table 2 of the HCC Toolkit). These are as follows:

Table 2: Hertfordshire County Council Services planning obligations contributions table

Bedrooms*	1	2	3	4	5+	1	2	3
	HOUSES Market & other					FLATS Market & other		
Secondary education	£263	£802	£2,561	£4,423	£5,662	£47	£444	£1,677
Childcare	£14	£64	£138	£199	£244	£8	£57	£89
Youth facilities	£6	£16	£50	£82	£105	£3	£13	£41
Library facilities	£98	£147	£198	£241	£265	£77	£129	£164
	HOUSES Social Rent					FLATS Social Rent		
Secondary education	£62	£450	£1,676	£2,669	£2,405	£14	£261	£1,084
Childcare	£12	£121	£188	£226	£277	£4	£65	£113
Youth facilities	£2	£8	£31	£51	£55	£1	£6	£21
Library facilities	£48	£91	£130	£156	£155	£38	£82	£107

*uses an assumed relationship between bedrooms and habitable rooms All figures are subject to indexation and will be indexed using the PUBSEC index base figure 175

The CIL Regulations discourage the use of formulae to calculate contributions however, the County Council is not able to adopt a CIL charge itself. Accordingly, in areas where a CIL charge has not been introduced to date, planning obligations in their restricted form are the only route to address the impact of a development. In instances where a development is not large enough to require on site provision but is large enough to generate an impact on a particular service, an evidenced mechanism is needed to form the basis of any planning obligation sought. HCC views the calculations and figures set out within the Toolkit as appropriate base costs for the obligations sought in this instance.

HCC’s standard approach is to request Table 2 of the Toolkit (below) is referred to and included within any Section 106 deed. This approach provides the certainty of identified contribution figures with the flexibility for an applicant/developer to amend the dwelling mix at a later stage and the financial contribution to be calculated accordingly. This ensures the contributions remain appropriate to the development and thereby meet the third test

of Regulation 122 of the Community Infrastructure Levy Regulations 2010 (amended 2019): "fairly and reasonably relates in scale and kind to the development".

Please note that current service information for the local area may change over time and projects to improve capacity may evolve. This may potentially mean a contribution towards other services could be required at the time any application is received in respect of this site.

Justification

The above primary education requirements have been calculated using the national average costs per place published in the DfE school place scorecards, available via the following link <https://www.gov.uk/government/statistics/local-authority-school-places-scorecards-2019>. Whilst the amounts and approach set out within the Planning Obligations Guidance - Toolkit for Hertfordshire (Hertfordshire County Council's requirements) document, which was approved by Hertfordshire County Council's Cabinet Panel on 21 January 2008 and is available via the following link: www.hertfordshire.gov.uk/planningobligationstoolkit, have been used for calculating the other requirements.

In respect of Regulation 122 of the CIL Regulations 2010 (amended 2019), the planning obligations sought from this proposal are:

(i) Necessary to make the development acceptable in planning terms.

Recognition that contributions should be made to mitigate the impact of development are set out in planning related policy documents. The NPPF states "Local planning authorities should consider whether otherwise unacceptable development could be made acceptable through the use of conditions or planning obligations." Conditions cannot be used cover the payment of financial contributions to mitigate the impact of a development (Circular 11/95: Use of conditions in planning permission, paragraph 83). In addition, for education requirements, paragraph 94 of Section 8 of the NPPF states: "It is important that a sufficient choice of school places is available to meet the needs of existing and new communities. Local planning authorities should take a proactive, positive and collaborative approach to meeting this requirement, and to development that will widen choice in education." The development plan background supports the provision of planning contributions. The provision of community facilities is a matter that is relevant to planning. The contributions sought will ensure that additional needs brought on by the development are met.

(ii) Directly related to the development;

The occupiers of new residential developments will have an additional impact upon local services. The financial contributions sought towards the above services are based on the size, type and tenure of the individual dwellings comprising this development following consultation with the Service providers and will only be used towards services and facilities serving the locality of the proposed development and therefore, for the benefit of the development's occupants.

(iii) Fairly and reasonably related in scale and kind to the development.

The above financial contributions have been calculated according to the size, type and tenure of each individual dwelling comprising the proposed development (based on the person yield).

I would be grateful if you would keep me informed about the progress of this application so that either instruction for a planning obligation can be given promptly if your authority is minded to grant consent or, in the event of an appeal, information can be submitted in support of the requested financial contributions and provisions.

Kind regards

Sarah



Sarah Burgess
Growth & Infrastructure Officer | Growth and Infrastructure Unit | Environment and Infrastructure
Hertfordshire County Council

County Hall, Pegs Lane, Hertford, SG13 8DE, Postal Point: CHN114

T: 01992 588303 (Internal:28303)

E: sarah.burgess@hertfordshire.gov.uk



Hertfordshire County Council

Guide to Developer Infrastructure Contributions



2021



Foreword

Planning for infrastructure provision is critical to ensure infrastructure is in the right place, made at the right time and sufficient to unlock opportunities into the future. The future approach to infrastructure planning and delivery in Hertfordshire will necessarily need to be funded by a variety of funding mechanisms and promoters of development sites will need to play their part. It is important that the infrastructure requirements identified to mitigate the impact of development are funded by developer contributions. This is fundamental to ensuring the delivery of good places, designed sustainably and without adding further stress to the infrastructure network.

Hertfordshire authorities have identified housing growth needs over the 13-year period to 2031 of on average requiring delivery of 6,425 dwellings per annum. This is a total housing supply of 83,530 dwellings that are expected between 2017/18 and 2031/32. ONS Population projections forecast a population increase of 107,400 people and 44,650 additional jobs are projected by the East of England Forecasting Model.

The Hertfordshire Infrastructure & Funding Prospectus 2018–2031 is a comprehensive piece of work documenting the scale of the growth challenging and highlighting infrastructure priorities for Hertfordshire. The document outlines a total projected infrastructure funding cost of £5.7bn and a projected funding gap of £3.59bn. To assist in bridging the gap, this Guide provides a transparent approach to how Hertfordshire County Council will work with developers through early engagement in the planning process.



Stephen Boulton
Hertfordshire County Councillor
Executive Member for Growth, Infrastructure & Planning

Contents

Chapter	Title	Page
1.0	Introduction	1
2.0	Hertfordshire	4
3.0	Hertfordshire County Council: Contributions	15
4.0	Hertfordshire County Council: Land Transfers	20
5.0	Hertfordshire County Council: Process	22
Appendix 1	Contacts	27
Appendix 2	Land Specification	30
Technical Appendices		
1	Transport	
2	Education: Early Years	
3	Education: Mainstream Schools	
4	Education: Special Schools	
5	YC Hertfordshire	
6	Libraries	
7	Waste	
8	Fire and Rescue Services	
9	Adult Social Care	

1.0 Introduction

1.1 The Purpose of this Guide

- 1.1.1 The town planning process makes places better and more sustainable balancing the social, economic and environmental effects to shape the way new communities grow. Healthy place making is supported by the development of infrastructure to support the way in which new communities will live. Planning obligations play a key part in the process of development, ensuring that infrastructure is timely, well-located and accessible.
- 1.1.2 This Guide provides a Hertfordshire overview of obligations which may be sought as part of the planning process followed by a focus on those obligations which might be sought by the county council to mitigate the impact of development. It replaces the previous Hertfordshire County Council policy document “Planning Obligations Guidance - Toolkit for Hertfordshire (Hertfordshire County Council's requirements)” approved in January 2008.
- 1.1.3 This Guide reflects the changes brought about by the introduction of the Community Infrastructure Levy (CIL) Regulations 2010 and includes changes to county council service delivery. It is further designed to identify the county council’s approach to the negotiation, preparation and completion of planning obligation agreements to developers; the District/Borough Councils; and other interested parties.
- 1.1.4 Following the publication of the Government White Paper, Planning for the Future¹, it is clear that significant changes may be proposed. Until such time as a new mechanism is enacted, the county council intends to refer to this Guide to support requests for developer contributions.
- 1.1.5 This Guide will be considered for review to reflect legislative changes, government guidance and as guidance and evidence to support county council representations is developed. Significant changes will be subject to further consultation.

1.2 The Status of this Guide

- 1.2.1 This Guide is not a statutory planning document unless adopted as such. It is a Guide with reference documents. Hertfordshire local planning authorities have the responsibility of weighing up the importance of this Guide and the identified planning obligations against competing requirements/issues when considering planning applications.

¹ <https://www.gov.uk/government/consultations/planning-for-the-future>

1.3 The Legislative Framework

- 1.3.1 **The Town and Country Planning Act** (1990) sets out the statutory provisions for planning obligations in Section 106 agreements (more commonly known as S106). Planning obligations may:
- restrict development or use of the land in any specified way;
 - require specified operations or activities to be carried out in, on, under or over the land;
 - require the land to be used in any specified way; or
 - require a sum or sums to be paid to the authority on a specified date or dates or periodically.
- 1.3.2 **The Planning Act** (2008) introduced a new system for approving major infrastructure of national importance, such as waste facilities, and replaced current regimes under several pieces of legislation. A key area of the Act was the introduction of CIL to finance infrastructure.
- 1.3.3 **The National Planning Policy Framework** (NPPF) is designed to make the planning system less complex and more accessible, to protect the environment and to promote sustainable growth. The NPPF cross references the specific legislative framework outlined in the Community Infrastructure Levy Regulations 2010 (as amended).
- 1.3.4 **Planning Practice Guidance** adds further context to the NPPF and it is intended that the two documents should be read together. There are more than 40 pieces of guidance, including on CIL and Planning Obligations.
- 1.3.5 This Guidance is clear that plans should 'seek to meet the development needs of their area, including community facilities such as schools'².
- 1.3.6 The **Community Infrastructure Levy Regulations** (2010) were introduced by the Planning Act 2008 as a tool for local authorities in England and Wales to help deliver infrastructure to support the development of their area. The CIL Regulations came into force on 6 April 2010 and a development may be liable for a charge under CIL, if a local planning authority (LPA) has chosen to set a charge in its area. CIL is not mandatory and under the current legislative context, county councils are unable to adopt a CIL.
- 1.3.7 The legal tests for when a planning obligation can be applied are set out in Regulation 122 (R122) of the CIL Regulations. The three tests of R122 are summarised below. A planning obligation may only constitute a reason for granting planning permission for a development if the obligation is:
- necessary to make the development acceptable in planning terms;
 - directly related to the development; and
 - fairly and reasonably related in scale and kind to the development.

² [Healthy and safe communities, paragraph 8.](#)

1.3.8 Further information on CIL and CIL charges in those areas adopting a charge are available on the District and Borough websites. Links to those websites can be found in Appendix 1.

1.4 The interaction between S106 and CIL

1.4.1 Where a local planning authority has adopted a CIL Charging Schedule, the way in which service providers seek developer contributions changes. Projects which may have previously been funded by planning obligations in S106 agreements might now be funded via the CIL mechanism. Except where charging authorities expect specific projects or types of project to be wholly funded by a CIL, the county council will use this Guide to outline the process for seeking planning obligations on behalf of service areas.

1.4.2 The CIL Regulations (as amended in September 2019) no longer impose a 'pooling restriction' on the use of planning obligations to fund the same type of infrastructure or infrastructure project, and an infrastructure project may receive funding from both CIL and Section 106.³

1.4.3 The collection, distribution and prioritisation of CIL funding is the responsibility of each charging authority. In coordination with our local authority stakeholders, the information within this Guide and the technical appendices may be referred to by the county council when seeking the allocation of CIL funding from a CIL charging authority. This may assist in the justification of appropriate levels of CIL towards projects which reflect the impact of growth.

1.4.4 In line with the current legislative context, the county council will ensure its obligations are handled in a fair, open and reasonable way and that they enable development to go ahead which would otherwise be refused. Planning obligations can relate to matters other than those covered by the planning permission provided there is a relationship between the planning obligation and the planning permission. Unacceptable development should never be permitted because of unnecessary or unrelated benefits offered by applicants.

³ [Securing developer contributions for education \(publishing.service.gov.uk\)](https://publishing.service.gov.uk)

2.0 Hertfordshire

2.1 The making of place

- 2.1.1 “The creation of high quality buildings and places is fundamental to what the planning and development process should achieve.”⁴ The NPPF clearly sets out that the Local Plan will set out the overall strategy for the pattern, scale and quality of development and this will involve the scale of infrastructure required to support the successful delivery of the Plan.
- 2.1.2 Investment in good place-making and masterplanning can be financially rewarding for developers and ultimately emotionally rewarding for residents. Whether in the physical design characteristics, the creation of new homes or businesses, job creation, biodiversity, addressing climate change or a place which provides a general sense of well-being, there are many factors which combine to create a place. New neighbourhoods are supported by fundamental buildings blocks, infrastructure, and the timely and appropriate location of that infrastructure can provide the foundation of the future place.
- 2.1.3 The county council is wholly supportive of masterplanning, to define and illustrate a vision for the place which is understood by all of the stakeholders in the development process. This includes existing residents and potential future residents.
- 2.1.4 Designing higher densities at transport nodes, walkable neighbourhoods which prioritise walking and cycling as the natural first option requires careful masterplanning, helps support healthier lifestyles, promotes community engagement in places where people can come together, children can play and supports local businesses. And overall can increase land value. People should be prioritised over cars.
- 2.1.5 Schools can play an important part of the masterplanned design, helping shape a focus at neighbourhood centres, combined with other community uses, parents drop kids off by foot, use shops, coffee shops etc.
- 2.1.6 Place-making and good design is supported by the timely delivery of infrastructure. Unlocking development and achieving housing delivery is sometimes restricted by financial cashflows. Government has recognised this issue through opportunities to bid for funding streams which unlock development schemes through the early delivery of infrastructure projects. The county council encourages the early delivery of infrastructure to support place-making, creating new neighbourhoods with the opportunity for residents to come together in shared space, community buildings and the public realm.
- 2.1.7 The continued stewardship of the place also creates a sustainable legacy, maintaining a high-quality place. This might cover a wide range of assets ordinarily managed by a variety of organisations. A commitment to the long-

⁴ [Paragraph 124, National Planning Policy Framework, 2019](#)

term stewardship of assets is part of the development process. Particularly for larger development sites, long-term funding for community assets needs to be explored at an early stage to ensure these considerations are protected, from the outset, in new developments.

- 2.1.8 A commitment to long-term stewardship puts people at the heart of delivering successful places, maintaining the quality of new facilities for new and existing residents. For developers it can add value to a development from the outset, create confidence in the place. For local authorities this can assist in minimising financial liabilities enabling any surplus to be reinvested, providing greater value to the community.
- 2.1.9 The county council is able to coordinate with developers to discuss how stewardship might best be approached. Not every situation is the same but there are various stewardship models available and the county council welcomes early engagement to protect these principles.

2.2 Sustainability and Climate Change

- 2.2.1 In 2019 the Climate Change Act was amended to include the legislative target for the UK to be a net zero greenhouse gas emissions country by 2050. Like many organisations (including the District and Borough Councils in Hertfordshire), Hertfordshire County Council declared a Climate Emergency in July 2019 and committed to preparing the [Sustainable Hertfordshire Strategy](#). This declaration was made in response to the need to act locally, having observed the global impacts of climate change including those from within Hertfordshire; dry riverbeds, reduced water supply, intense weather events, localised flooding and Hertfordshire specific loss of habitat and species.
- 2.2.2 The county council is very aware that we cannot take action alone and in parallel to the work of the county council, the Leaders and CEXs of each Hertfordshire local authority unanimously agreed that a countywide approach to tackling climate change and ensuring sustainable development principles are at the forefront of the growth agenda. The Hertfordshire Climate Change and Sustainability Partnership consists of all the Hertfordshire local authorities and the Local Enterprise Partnership (LEP). Four priority areas for action are identified as: Water, Carbon, Biodiversity and Transport. Officer working groups support the partnership to prepare action plans for each of the priority areas and these action plans will cover; resilience, mitigation and adaptation. It is very keenly recognised that planning has a significant role to play in the development and implementation of suitable policies and this will be reflected in engagement and the delivery of projects required to mitigate the impact of development.

2.3 Infrastructure Contributions

- 2.3.1 Hertfordshire County Council is responsible for delivering and maintaining much of the large-scale infrastructure that its residents and businesses require, such as roads, schools, waste disposal services and libraries.

- 2.3.2 Local services are also provided by the appropriate local authority (City, Borough or District Councils). There are eleven local planning authorities in Hertfordshire (including the County Council). These local authorities plan for services such as affordable housing, waste collection, leisure and recreation services. The local authorities may seek developer contributions towards the infrastructure for which they are responsible.
- 2.3.3 The authorities also consult with other infrastructure providers to understand the complete needs of infrastructure required to mitigate the impact of development. This might, for example, include Highways England, the NHS, the Hertfordshire Constabulary and the Environment Agency.
- 2.3.4 The following paragraphs briefly outline those types of infrastructure which may be secured by developer contributions in Hertfordshire. This chapter does not necessarily present an exhaustive list. The level and range of developer contributions will be the subject of negotiation between the local planning authority and developer.

Not all of the infrastructure types indicated below are requested by the county council, this chapter is intended to be an indication of the different types and organisations involved in this work for Hertfordshire generally. Developers should contact the local planning authority for further advice.

Affordable housing

- 2.3.5 Affordable housing includes social rented, affordable rented and intermediate housing, provided to specified eligible households whose needs are not met by the market. It can be a new-build property or a private sector property that has been purchased for use as an affordable home. Most residential development proposals in Hertfordshire will require the provision of on-site affordable housing provision that meets the needs of all resident groups. Local planning authorities will define affordable housing policies through their Development Plan and further information is available from each Hertfordshire authority using the links shown in Appendix 4.

Adult Care Services

- 2.4 There are a number of proposed projects which are identified to meet very specific needs of people accessing adult care services in Hertfordshire. For mental health needs, these might include small blocks of 12 or so flats with an on-site office, in a number of areas. In addition, there is a need for move-on accommodation of self-contained flats in general needs accommodation. For vulnerable people this includes support currently provided to a range of groups such as women fleeing domestic violence; homeless single people

and families, and people with substance misuse problems. Where there is an identified local need which will be exacerbated by new development, contributions will be sought towards on-site or off-site projects to meet new demand.

- 2.5 The county council has developed design guidance which details the preferred geographical location and layouts for some adult care services and developers are advised, particularly for larger strategic sites where on-site provision may be sought, to seek early engagement to support the development of masterplans.

Air quality

- 2.6 Local authorities in the UK have a responsibility under Local Air Quality Management (LAQM) legislation to review air quality. Where concentrations exceed national objectives, measures should be put in place to reduce emissions, and be reported in the local Air Quality Action Plan (AQAP). Most such Action Plans are designed to address difficulties in complying with national objectives for either NO₂ or PM₁₀. In some instances, it may be necessary to seek developer obligations towards improvement measures either via direct delivery of a project or via a financial contribution to a project serving a wider local area.

Ambulance service

- 2.7 Where new development would require improvements to expand provision and/or the redistribution or re-organisation of ambulance services to meet new areas of demand it may be necessary to seek obligations towards the ambulance service. This may be part of hub projects to co-locate blue-light services (with the police and fire services).

Archaeology

- 2.8 In most cases, the investigation and recording of archaeological remains can be covered by planning condition. However, in some circumstances a planning obligation may be necessary and could cover, for example, the deposit and storage of archaeological artifacts. Early engagement with specialist county council officers is advised.

Community centres/ halls

- 2.9 Community centres can act as a social focus for new communities and they may play an important part in the development of new relationships for residents. A community centre might act as a hub for a variety of public and private uses and where there is an identified need for a new centre or hall a variety of infrastructure providers might be interested in accessing space.
- 2.10 Community centres can provide for a co-location of many services such as: blue-light services (with access to lockable storage space for equipment); health services (with access to private consulting space); libraries (with

potential to support roll-able shelving for books or storage for digital project work); play space for early years education groups; community meeting groups; and youth clubs.

- 2.11 Where community centres or halls are required, the transfer of land and buildings might be dealt with via a S106 agreement. Where existing centres or halls can expand or improve their provision to meet additional demand, it may be appropriate to provide financial contributions for off-site provisions.

Cultural facilities

- 2.12 Demand for improvements to museums, galleries or theatres would ordinarily be outlined within the Development Plan although smaller projects such as public art installations may not. Where obligations can be supported by a clear evidence of need and/or policy, and where they meet the tests for S106, developer contributions or on-site provision (for example as part of town centre regeneration projects) may be identified as part of a S106.

Digital connectivity

- 2.13 Digital connectivity has the ability to dramatically alter the way in which we live, work, travel, learn and access services. Some Hertfordshire authorities have adopted specific policy in their Development Plan which guides the expectations for new developments, further information is available from each Hertfordshire authority using the links shown in Appendix 4.
- 2.14 Whilst direct financial contributions might not be sought for the delivery of digital access (i.e. cabling in the ground), more and more infrastructure providers are developing projects which rely on fast connectivity to digital networks. Projects which enable access to digital services may be identified to support new development, for example improvements to WIFI projects at a local library or community centre.

Education: Early Years

- 2.15 The county council currently has a number of statutory duties it has to meet regarding free early education (FEE) and childcare which are outlined in a technical appendix which accompanies this Guide. Financial contributions may be sought to help extend existing provision or provide a new facility. Where the development in question also triggers the need for other community facilities it is often appropriate to co-locate early years facilities.
- 2.16 Wholly new provision will be considered on a case by case basis but should be DfE compliant. County council officers can provide details of Ofsted complaint space requirements which can save time and money later in the process of delivery of FEE space. The ability to access known networks of FEE providers and how best to market new accommodation is also a service offered by the county council which can ensure timely provision of facilities to meet demand from early occupations.

Education: Mainstream

- 2.17 The county council is the local authority which has the statutory responsibility for education. It has a duty to ensure that there are sufficient school places to meet the needs of the population now and in the future. Mainstream education provision includes nursery, primary, secondary and post-16 (up to the age of 19) education. In three tier areas primary and secondary education is divided into first, middle and upper education.
- 2.18 Where there is considered to be insufficient capacity in local schools to cater for the development (and other sites if appropriate) planning obligations will be sought. On strategic sites, the provision of land and build costs for on-site schools is usually required. Nursery provision is made at primary schools, while new secondary schools will also offer post-16 education.
- 2.19 Schools play an important part in the establishment of new communities. Community use agreements for school playing fields can also form an important part of on-site open space. This can be one example of providing a more flexible use of the space outside of school operating hours. The county council would advise early engagement for masterplanning purposes on strategic sites.

Education: Special Schools and Specialist Provision

- 2.20 The county council has a duty to promote high standards of education, fair access to education and a general duty to secure the sufficiency of school places. It must consider the need to secure provision for children with Special Educational Needs and Disabilities (SEND), including the duty to respond to parents' representations about school provision. The county council must secure sufficient education and training provision for young people with an Education, Health and Care (EHC) plan up to the age of 25.
- 2.21 Where existing capacity is unable to mitigate the impact of development, the county council will seek planning obligations to create new provision, whether through the expansion of existing special schools or specialist provision, or through the creation of new special schools or specialist resource provision in mainstream schools.
- 2.22 Few, if any, new developments will generate the requirement for an entire new SEND school. However, on strategic sites the county council may seek land allocations for SEND provision through the local plan process to serve a wider need arising from growth across a district or other wider geography.

Fire and Rescue service

- 2.23 The county council, in its capacity as the Fire and Rescue Authority, has a statutory duty to ensure that all development is provided with adequate water supplies for firefighting. This includes the provision of fire hydrants which may be secured through the planning process.

- 2.24 The ability of developments to be adequately served by fire and rescue services will be assessed on an individual basis and impacts may need to be addressed through financial contributions. This may include contributions towards a new blue-light hub, a new fire station or an extension to an existing facility or alternatively, the provision of sprinklers in commercial and/or domestic properties.

Green (and blue) infrastructure

- 2.25 Green infrastructure (sometimes referred to as blue infrastructure in relation to watercourses) can include: parks; fields; woodlands; rivers; wetlands; allotments; and private gardens. Green infrastructure should be networked. Networking urban parks, footpaths and quiet country lanes to open access land provides better access to the countryside and therein provides greater positive benefits to health and wellbeing. Developments may be required to provide onsite projects to support and improve the green infrastructure network, and meet biodiversity net gain requirements, or financial contributions may be sought towards off site projects.
- 2.26 Contributions may also be sought by the local planning authority for the maintenance of green infrastructure as part of any development. On larger development sites, there may instead be a requirement for the establishment of a management company for ongoing maintenance and management of these networks.
- 2.27 Public Rights of Way can form important connections between open spaces and improvements are managed by the county council. Contact with specialist county council officers as part of the application process will confirm any requirements on a case by case basis.

Health

- 2.28 The need for new health service facilities in connection with new development is assessed by NHS England, who will also consult with the local CCG. This would take into account the capacity of existing primary care/acute facilities provision and the demographic nature of the area. The scope of health care infrastructure may include capital provision and/or related funding and services. Opportunities for combining health service provision, with other infrastructure or facilities provision as part of shared floor space within a local centre, might also be explored.
- 2.29 Public Health functions and strategies are delivered by the county council and those responsibilities are set out with the Hertfordshire Health and Wellbeing Strategy and the Hertfordshire and West Essex Sustainability and Transformation Plan. The need for planning obligations is assessed on a case by case basis.
- 2.30 Further to this, the county council advocates the completion of Health Impact Assessments and sets out when it expects one to be undertaken, guidance

on appropriate methodology and clarity on how it will be assessed is available via the county council website.

Libraries

- 2.31 As Local Libraries Authority, the county council has a duty to provide a comprehensive and efficient library service for everyone who lives, works, or studies in the county. The county council is committed to maintaining and modernising its libraries to continue to meet the changing needs of service users and to cope with additional demand brought about by new development. Where improvements and/or new provision is required to mitigate the impact of new developments, financial contributions will be sought on behalf of the library authority.
- 2.32 Where new community facilities are due to be built, the library service may also consider the use of space within that facility, where appropriate, supported by additional resources.

Mineral workings

- 2.33 The county council identifies potential new sites for minerals extraction in the Minerals Local Plan. In instances where applications require mineral workings, it may be necessary to seek financial contributions or mitigation projects for the restoration and aftercare of mineral sites and to meet biodiversity net gain requirements. Each application is assessed on a case by case basis and developers are advised to seek professional guidance from the specialist county council officers.

Open space, sport and recreation

- 2.34 The provision of outdoor space for sport and recreation will be outlined within a Development Plan and Sport England is a statutory consultee for any application for development affecting playing field land. Planning Practice Guidance also recommends consultation with Sport England on a number of other sports related applications.
- 2.35 Contributions may be requested by the local planning authority to support the maintenance of onsite provision and/or financial contributions towards off-site projects. This may include: play areas; playing fields; tennis courts; multi-use games areas; indoor sports facilities; and swimming pools.
- 2.36 Some uses can also be provided as part of school sites and where this would not affect the operation of schools, the county council will consider community use agreements for shared facilities. In some instances, it may be appropriate to provide additional funding to ensure that facilities for use by the wider community are compliant with Sport England standards. Each one is considered on a case by case basis.

Police service

- 2.37 Local authorities have a statutory duty to work with the Police and other partners to reduce crime and disorder in their area. Carefully planned design would only mean that where sites are located near to crime hotspots contributions may be sought for community or locally based safety projects. For strategic sites there may also be potential for co-location with other blue-light services in a single location and proportionate financial contributions may be sought from individual applications in areas of demand.

Public realm

- 2.38 Contributions may be sought towards improvements to the street scene which may include: hard and soft landscaping; street furniture; signage; public art. On-site improvements may also be sought by condition. Anticipated improvements may be set out within town centre or area specific strategies and developers should contact the local planning authority for further advice.

Sustainable drainage systems (SuDS)

- 2.39 The county council is the Lead Local Flood Authority and is a statutory consultee in planning for all major development in relation to the management of surface water drainage. Further guidance is available on the county council website which includes SuDS design guidance.
- 2.40 The inspection and monitoring of drainage works during construction can be covered by planning condition. Whilst each development is assessed on a case by case basis, a planning obligation may be necessary to cover the future maintenance and adoption of the SuDS in the new development, by an appointed management company, for example.

Transport

- 2.41 Planning obligations can be used to ensure developments maximise accessibility by sustainable modes. They can also be used to ensure developments have safe access/egress and minimise development-related impacts such as traffic congestion.
- 2.42 For larger strategic developments, it may be necessary for engagement with Highways England and/or the Department for Transport.
- 2.43 In line with the Local Transport Plan (LTP4) the county council will actively seek planning obligations which will improve sustainable transport facilities and services for passenger transport users who are using the development and generally for those users in the surrounding area. This will also include improvements to Public Rights of Way (see also green infrastructure).
- 2.44 Measures necessary to mitigate against the impact of new developments should be identified through Transport Assessments (TAs) or via site specific

negotiations. Further detail for county council functions is provided in Chapter 5 and the Technical Appendix for Transport.

Waste infrastructure

- 2.45 The Hertfordshire district, borough and city councils are Waste Collecting Authorities (WCAs) and as such may seek financial contributions towards WCA receptacles which are used by householders for kerbside collections. Larger developments may also be required to support the development of community recycling points.
- 2.46 As Waste Disposal Authority, the county council is responsible for disposal of local authority collected waste arising in the county and collected by the WCAs. The county council achieves this via a network of waste transfer stations and household waste recycling centres. Where capacity is evidently reached, new development will exacerbate the function of the WDA and developers may be asked to contribute towards the expansion of existing or delivery of new sites.

Wildlife Sites, habitat and landscape improvements

- 2.47 The Environment Bill will introduce a mandatory biodiversity net gain, to ensure that new developments enhance biodiversity; compensate for biodiversity loss where it cannot be avoided or mitigated.
- 2.48 Even small-scale developments may have detrimental impacts on habitats and landscapes and where onsite solutions to mitigate impacts cannot be met, contributions to offsetting via projects offsite will be sought.
- 2.49 A county-level shared service known as Hertfordshire Ecology, provided by the county council, provides ecological planning advice to eight Hertfordshire local authorities and the county council. This service can provide guidance on development impacts and advise on any likely solutions and/or contributions which could be sought via planning obligations.

YC Hertfordshire

- 2.50 YC Hertfordshire provides a varied planned informal education programme across the county, in order to promote young people's personal and social development. This includes youth work projects and programmes, information, advice, guidance, work-related learning, outdoor education and one-to-one support. The service provides a statutory function in supporting the well-being of young people and where new development increases demand for young people's services, financial obligations will be sought.
- 2.51 A number of infrastructure providers are involved in the assessment of requirements necessary to make development acceptable. The local planning authority will weigh the balance of needs in the determination of each individual planning application. The following chapter outlines those service areas which are a responsibility of the county council. The chapter is

supported by a number of technical appendices available alongside the Guide.

- 2.52 This list is not exhaustive and you should contact the local planning authority for further advice.

3.0 Hertfordshire County Council: Contributions

3.1 Overview

3.1.1 The county council is responsible for ensuring the provision of a range of services and seeks contributions and/or facilities from development, where not covered by a CIL charge (to eliminate any occasion where infrastructure may be sought by S106 and CIL), which would have an additional impact on service provision, including but not limited to:

- Adult Care Services;
- Education:
 - Early Years;
 - Mainstream;
 - Special Schools;
- Fire and rescue services;
- Libraries;
- Transport;
- Waste Disposal;
- Youth.

3.1.2 Whilst not related directly to service provision, other matters such as: economic development; archaeology; green infrastructure; sustainable drainage systems; and public health may also attract the need for planning obligations.

3.1.3 Planning obligations towards the above can be in the form of financial contributions; works; on site provision; or land.

3.2 How we assess the impact of each development

3.2.1 Hertfordshire County Council has developed a demographic model to project the likely population of any given development. A Guide to the model and an online version of it are available alongside this Guide.

3.2.2 The model can operate at different levels of complexity to account for the level of information available at any given point in the planning application process. The more detail provided for input into the model, the more detailed the result.

3.2.3 The model methodology is consistently applied to assist in determining the impact of an individual development on an infrastructure project. For example, the model can estimate how many 11 to 19 year olds might reside in a development over time, and therefore allow the county council to indicate a reasonable contribution towards a YC Hertfordshire (youth) project.

3.2.4 The approach to pupil yield calculations (for school place projections) differs slightly and is explained within the relevant technical appendix.

- 3.2.5 Outputs from the demographic model can be provided to applicants on request. Details of the total number of units, number of flats and/or houses and the tenure of an application are helpful datasets to facilitate the modelling. Each of the (non-transport) service technical appendices will refer to the demographic model. Full detail on the model is available alongside this Guide at hertfordshire.gov.uk.
- 3.2.6 The technical appendices also provide information on the approach and justification for seeking planning obligations from new development on a service by service basis. They advise on thresholds, base charges and comment on the potential use of contributions. However, information regarding specific projects will be provided at the time of a pre-application enquiry or consultation on a case by case basis.
- 3.2.7 Although the CIL Regulations discourage the use of formulae to calculate contributions, the county council is not in a position to adopt a CIL charge itself. Accordingly, in areas where a CIL charge has not been introduced, planning obligations remain the only route to addressing the impact of a development where financial contributions or provision (e.g. land) is required. In instances where a development is not large enough to require on site provision but is large enough to generate an impact on service provision, an evidenced mechanism is needed to form the basis of any planning obligation sought. The methodology for county council services (see Technical Appendices) are considered appropriate for such a mechanism. This is particularly true in instances where an application has been submitted in outline allowing the mix and number of dwellings to change at the Reserved Matters stage. Where the cost of an identified project is known in advance of a Section 106 being agreed, bespoke calculations may also be considered.
- 3.2.8 Aside from thresholds identified in national guidance, the county council does not intend to set a specific county wide threshold in relation to seeking planning obligations. The need for planning obligations from individual applications will be assessed on a site by site basis and will be determined by local circumstances. This is compatible with the requirements of the CIL Regulations.
- 3.2.9 Local planning authorities may set their own thresholds or deem contributions inapplicable in certain instances. This should be checked with the relevant local planning authority.
- 3.2.10 Where an application involves demolition the obligations sought are assessed according to the net gain of dwellings or floor space. In instances where an application is made for a change of use which may not result in a change in floor space, an assessment of impact will still be needed, particularly in relation to Highway matters as, for example trips rates may be affected.

3.3 How infrastructure projects are identified

- 3.3.1 In alignment with the NPPF, the county council would expect infrastructure to be planned and tested throughout the development of a Local Plan and therefore policy making. The county council will coordinate with Hertfordshire local planning authorities throughout plan production, and engagement is outlined in the Local and Strategic Plans Engagement Document.
- 3.3.2 This Guide outlines the approach of the county council at the decision-making stage, although infrastructure requirements, particularly from strategic development sites, should be outlined within Local Plan policies and supporting evidence such as Infrastructure Delivery Plans. This aligns with the NPPF.
- 3.3.3 When determining the impact of strategic sites, the county council would generally expect such sites to generate the need for a new infrastructure setting, for example a new school. However, to mitigate the impact of a selection of smaller sites, the county council may explore pooling of S106 contributions, subject to legislation, in order to fairly and efficiently mitigate their combined or cumulative effects.
- 3.3.4 In order to forward plan for infrastructure provision, the county council monitors the progression of allocated and potential windfall sites by coordinating with the Hertfordshire LPAs, and neighbouring planning authorities where appropriate. Local Plans form the basis for service-related infrastructure planning. The NPPF recognises that:

“
34. Plans should set out the contributions expected from development. This should include setting out the levels and types of affordable housing provision required, along with other infrastructure (such as that needed for education, health, transport, flood and water management, green and digital infrastructure). Such policies should not undermine the deliverability of the plan.
”

- 3.3.5 Strategic sites are usually supported by specific planning policy which dictates the key infrastructure required to mitigate a development's impact. Further supporting infrastructure may also be required and each service provider is expected to provide robust evidence to support the lawfulness of any request by illustrating how the project meets the three tests of R122⁵.
- 3.3.6 In support of a Local Plan, an LPA may publish an Infrastructure Delivery Plan (IDP). An IDP sets out the infrastructure required to support the development outlined within a Local Plan. The county council encourages collaborative working to develop a joint working approach to IDPs.

⁵ [CIL Regulations 2010 \(as amended\)](#).

3.3.7 In support of known infrastructure requirements to 2031, The Hertfordshire Infrastructure Funding Prospectus (HIFP) was completed in 2018. The HIFP key findings for Hertfordshire included:

“

- *an identified housing growth over the 13 year period to 2031 of on average 6,425 dwellings per annum. This compares to average annual completions of 3,189 dwellings per year across Hertfordshire from 2011/12 to 2016/17;*
- *a total housing supply of 83,530 dwellings that are expected between 2017/18 and 2031/32;*
- *an identified housing need for approximately 97,411 homes between 2018 and 2031;*
- *a forecast population increase of 107,400 people (an increase of 9%); and*
- *a forecast of 44,650 additional jobs, an increase of 6%.*

”

The HIFP is available online [via this link](#)

3.3.8 Circumstances may change if there are delays to developments coming forward as part of the town planning process. Service needs can fluctuate depending on a number of variables which may be beyond the control of a service provider, for example change in national policy, a sudden rise in birth rates or parental choice for a particular school. Applicants are therefore strongly advised to contact their local planning authority at the earliest opportunity to discuss potential infrastructure impacts.

3.3.9 Hertfordshire County Council welcomes engagement at the earliest opportunity and would expect the local planning authority to be included in discussions relevant to a planning application.

3.4 The scale of obligation

3.4.1 The scale of each obligation will depend on the infrastructure project identified to mitigate the impact of an individual development site. The county council will only seek obligations towards a particular service area where there is an identified need. Developers and applicants are encouraged to contact the local planning authority in the first instance to coordinate this process.

3.4.2 The county council provides indications of costs within the Technical Appendices. As project costs will vary by application, and therefore mitigation measure, the county council will confirm precise obligations at the point of consultation. This enables the county council to ensure that it meets the three tests in seeking reasonable and proportionate obligations.

3.4.3 Before requesting a planning obligation, the county council will assess:

- a) If there is an identified need in the local area; and
- b) If the project identified to mitigate the impact of development aligns with the estimated costs shown in the Technical Appendix.

Where the scope of a project varies from the examples shown within each Technical Appendix these costs may change.

- 3.4.4 Additional service requirements may be identified on a case by case basis. Many issues such as the conservation and enhancement of public rights of way (PROW), archaeology, wildlife, geology, habitats and the landscape (as well as creating opportunities for new environmental features including biodiversity) are where the county council often advises the local planning authority. These issues are often equally as important as those which attract financial obligations but are likely to vary considerably depending on specific site circumstances.
- 3.4.5 Other matters may therefore be considered on a case by case basis and the county council advises early engagement to identify contributions as soon as possible.

3.5 Viability of development sites

- 3.5.1 The county council would expect viability in the decision-making process to be assessed in line with national guidance.
- 3.5.2 It is recognised that it is the responsibility of the local planning authority to assess the reasonableness of the level of contribution sought by any individual S106 obligation. Only a local planning authority can consider the combined implications of all of the obligations on an individual application. Hertfordshire County Council requests that all discussions regarding a level of contribution are directed to the local planning authority in the first instance.
- 3.5.3 On occasion, it may be necessary for a local planning authority to take a view on the viability of a development to meet the infrastructure requirements outlined by each infrastructure provider. In these instances, and specifically where a County service need is reduced, Hertfordshire County Council would expect viability evidence to be prepared and shared in alignment with national guidance.
- 3.5.4 There should be no reduction to obligations where it is found that an applicant has paid too much for land.
- 3.5.5 County council officers will be required to report any departure from the normal approach for S106, as outlined within this Guide, to County Council senior teams and Executive Members. Hertfordshire County Council will be transparent regarding any and all S106 processes, decisions and procedures.

4.0 Hertfordshire County Council: Land transfers

4.1 The requirement for land

4.1.1 There are a number of circumstances under which the county council may need land to be transferred to its ownership. These might include new or expanded schools and nurseries, buildings for community services or land to be dedicated as Highway or other form of travel infrastructure.

4.1.2 In most cases land is needed to establish a new facility on the development itself but in some circumstances it may be needed to expand an existing service location. There may be instances whereby the total land area, for a new school as an example, is not required to make the planning application acceptable in planning terms. In those instances there may be a need for developers to work together to agree an approach to land equalisation. Each development will be considered on a site by site basis.

4.2 Location and suitability

4.2.1 To identify the most appropriate location for a particular infrastructure project, Hertfordshire County Council would encourage developers to discuss plans at the earliest opportunity. The applicant will need to work closely with Hertfordshire County Council and the local planning authority to identify potential locations for new services which should, for large strategic sites, include the production of a masterplan. The location of a potential Hertfordshire County Council service need will need to be carefully considered in relation to other potential non-compatible uses.

4.2.2 Once the location of a site has been agreed, ground conditions must be considered. The most current and relevant Hertfordshire County Council Land Specification should be referred to. A current version of the Education Land Specification is shown in Appendix 2 but developers should contact **growth@hertfordshire.gov.uk** for the most up to date version.

4.1.3 In order to confirm site acceptability, Hertfordshire County Council would request the opportunity to visit the site is provided to officers and that, specifically in relation to the site area in question, the following checklist of items is compiled into a report and provided to Hertfordshire County Council for review:

- Site boundary plan (must include GIS polygon file)
- Development master-plan including partner organisation intentions
- Site history & previous uses
- Neighbouring land uses including ditches and power lines
- Ground conditions including local geology maps
- Topography including survey maps
- Contamination including radiation, soil and ground water
- Flood risk including Environment Agency flood zone designation
- Mobile phone/radio mast locations

- Physical encumbrances
- Habitat, arboriculture & ecology study including site walkover report
- Archaeology
- Noise (for education sites assessment)
- Air quality including reference to local Air Quality Management Areas
- Access (pedestrian & vehicular) and public rights of way
- Utility and service connections/capacity including searches
- Proposed pre-transfer works.
- Pre-existing claims or evidence of past use as a highway or Right of Way.

The availability of any information in GIS files will improve the efficiency in reviewing the data and information.

4.2.4 Upon receipt of the requested information, the county council will provide feedback to the local planning authority on site suitability. Developers will be expected to adhere to the Land Specification shown in Appendix 2 (or its equivalent replacement), and for a 'Typical Standard' (also in Appendix 2) also to be included within any S106 agreement. Developers must obtain collateral warranties for any studies and works undertaken to support the site agreement or site preparation works. These warranties must be transferred to Hertfordshire County Council.

4.2.5 See also Appendix 2 for the current site sizes for education purposes.

5.0 Hertfordshire County Council: Process

5.1 Who to contact

- 5.1.1 Planning obligations in relation to all non-transport matters are sought by officers in the Growth and Infrastructure Unit. The team can be contacted via the following email address:

growth@hertfordshire.gov.uk

- 5.1.2 Planning obligations in relation to transport matters are sought by officers working within the Highways Development Management Team. The team can be contacted via the following email address:

highwaysplanning@hertfordshire.gov.uk

- 5.1.3 The county council works closely with the Hertfordshire local planning authorities. The authorities receive and determine planning applications. When planning applications are made, the county council is consulted by each local planning authority and will provide appropriate advice and comments regarding the needs of infrastructure for which is it responsible. Those needs may be met through a S106 obligation, or, where one exists the Community Infrastructure Levy or through another alternative and appropriate mechanism. Where the needs of a development are not met by an individual development, the county council may object to the application.
- 5.1.4 Alternative mechanisms to a S106 agreement might reasonably include planning conditions, highway works carried out pursuant to agreements under section 38 or section 278 of the Highways Act 1980. The appropriateness of each approach and their interrelationship as a means of delivering infrastructure requirements will be considered on a case by case basis.

In all scenarios, the county council encourages early and ongoing engagement throughout the planning process, whether this be through the plan-making or decision-making processes.

5.2 Planning Performance Agreements and Service Specific Advice

- 5.2.1 In developing a planning application and the subsequent S106 legal agreement, applicants may request a planning performance agreement (PPA). PPAs are voluntary agreements that enable applicants and local authorities to agree timescales, actions and resources necessary to support the development of a planning application. For a large organisation such as

the county council, this has numerous benefits not least of which is a coordinated response from a number of internal service departments.

- 5.2.2 On a case by case basis, the county council will consider the need for PPAs alongside available resource. In some instances this requires securing external resources which are also chargeable through the PPA. Stakeholders are invited to contact the growth email address provided in paragraph 5.1 with details of the development site to discuss this in the first instance. Template examples of PPAs can be provided upon request. Fees may be incurred for legal checks if the format of the PPA varies considerably from the template document.
- 5.2.3 In some scenarios, applicants prefer to secure specific chargeable advice from one service area in advance of any other county council functions. This is sometimes referred to as pre-application advice. The most common areas and contact email addresses for specific service area requests are detailed in the table below:

Service area	Email address
Transport	highwaysplanning@hertfordshire.gov.uk
Flood and drainage	frmconsultations@hertfordshire.gov.uk
Ordinary watercourses	ordinarywatercourses@hertfordshire.gov.uk
Historic environment	historic.environment@hertfordshire.gov.uk
Ecology	ecology@hertfordshire.gov.uk
Landscape	landscape@hertfordshire.gov.uk
Sustainability	sustainableherts@hertfordshire.gov.uk
Public Health	publichealth@hertfordshire.gov.uk
All other enquiries	growth@hertfordshire.gov.uk

5.3 Developing the Legal Agreement

- 5.3.1 Please refer also to the Legal Pack that accompanies this Guide.
- 5.3.2 Planning obligations must be included within a legal document often referred to as the Section 106 agreement (S106). This deed can also be in the form of a unilateral undertaking (the latter does not include reciprocal obligations from the receiving authorities).
- 5.3.3 The county council discourages the use of any legal agreement for which the county council is a receiving authority but not a signatory. This is to ensure that risk to public sector funding is minimised and planning obligations identified within the agreement are CIL compliant. The county council encourages early engagement in determining all planning obligations to ensure that they comply with the Regulations.
- 5.3.4 The first draft of a S106 can be produced by the county council, the local planning authority or the applicant/s. On behalf of the county council and the local planning authority S106s are usually handled by solicitors taking instructions from professional clients (e.g. planning and highway officers). The current county council model template document is included within the

legal pack that accompanies this Guide. However, some authorities have their own templates/standard clauses; accordingly it can be helpful to agree which template will be most appropriate in each case before the first draft is drawn up. The template/s attached to this document provide clauses which the county council regularly use and can be inserted into drafts based on alternative models where required.

- 5.3.5 Depending on the nature and complexity of the proposal, the attached templates may need to be amended and/or supplemented. Advice will be given on a case by case basis where necessary.
- 5.3.6 For land transfers, the county council would require an unencumbered freehold land transfer to form part of the S106 agreement.
- 5.3.7 Planning applicants are required to give an undertaking to pay costs for the preparation of legal agreements in advance of the S106 being drafted (fee rates are set out in the legal pack that accompanies this Guide). Further advice on the legal agreement process can be obtained by the contacts listed at paragraph 5.1, directly via the county council legal team at environmentlaw@hertfordshire.gov.uk or from the individual local planning authority listed at Appendix 1.

5.4 Appeals

- 5.4.1 Where a planning application is submitted to the Planning Inspectorate for appeal and the county council has sought planning obligations from the proposal, the council should be involved in the process.
- 5.4.2 The county council will assist and encourage applicants to make contact regarding the production of S106 drafts in advance of the appeal so that agreement can be reached where possible. The council will communicate with the appellant, LPA and the Planning Inspectorate as appropriate, and prepare statements, or appear as witnesses at appeal hearings and inquiries where necessary in support of the obligations being sought. It will also provide any additional information (or updated information where there has been a significant period of time between responding to a consultation on application and an appeal) required in respect of the CIL Regulations.

5.5 Monitoring fees, Indexation, Receipt and Spending of S106 Monies

Monitoring fees for county council matters

- 5.5.1 Once the S106 is agreed, and the development starts to build, the county council incurs costs associated with managing and monitoring the agreement. The county council considers that it should reasonably be able to recover a degree of the costs incurred as part of this process. It is the aim of the county council to provide as transparent, efficient and cost-effective service as possible within the resources available. Costs may include:-

- The maintenance and development of its planning obligations monitoring system (via an integrated database), to help co-ordinate obligation preparation, completion, monitoring and review;
- Monitoring of trigger points and development progress;
- Pre-emptive alerts for obligations that are or are to become overdue;
- Recovery of obligation payments not made, including any necessary formal or legal action;
- Liaison between the county council and district/borough councils, where infrastructure and facilities are provided by one level of authority but the financial contribution is held by the other;
- Providing reports on the operation and outcome of county council developer contributions.

5.5.2 A charge would be made based on the number of triggers within each legal agreement. Each trigger will attract a charge of £340.00⁶. For example:

- a) a total of four obligations all due on commencement of development would require a total monitoring fee of £340 as the work associated with monitoring that trigger can be combined into one process;
- b) a total of four obligations due at different stages of development would require a total monitoring fee of £1,360 (4 x £340) as the work associated with monitoring each different trigger will be replicated four times in the process.

Monitoring fees will be adjusted for inflation against RPI. VAT is not charged on monitoring fees.

5.5.3 Where strategic housing development occurs of more than 500 dwellings a fixed negotiated monitoring administrative cost would be charged to reflect the associated costs of monitoring large schemes, which may have, for example, multiple builders, several phases of development and be built out over a longer time period.

5.5.4 Section 106 contributions are required to be paid in accordance with the terms of the S106 agreement. A form is attached to the model template shown in the legal pack which sets out this process, including how and where contributions should be paid.

Indexation

5.5.5 The county council requires contributions to be subject to indexation to account for inflation and ensure their value is retained. Historically a number of different indices have been used. To provide clarity and simplicity, the following indices will be used by the county council:

- Building Cost Information Service, BCIS (all non-highways/ transport infrastructure);

⁶ This figure is based on 8 hours for a Monitoring Officer and 4 hours for a Senior Planning Officer per trigger.

- SPON'S Index (Highways and transportation);
- Confederation of Passenger Transport Index, CPT (Passenger Transport i.e. bus services); and
- Retail Price Index, RPI (travel plans).

5.5.6 Indexation should be applied from the date at which the costs are set not at the point of committee or S106 agreement. Each agreement will detail specifically how indexation should be applied.

Receipts and spend

5.5.7 Once received, contributions are held and spent in accordance with the relevant S106. Financial contributions are monitored and tracked to expenditure on specified projects to ensure that it occurs within relevant timeframes as set out in the legal documents.

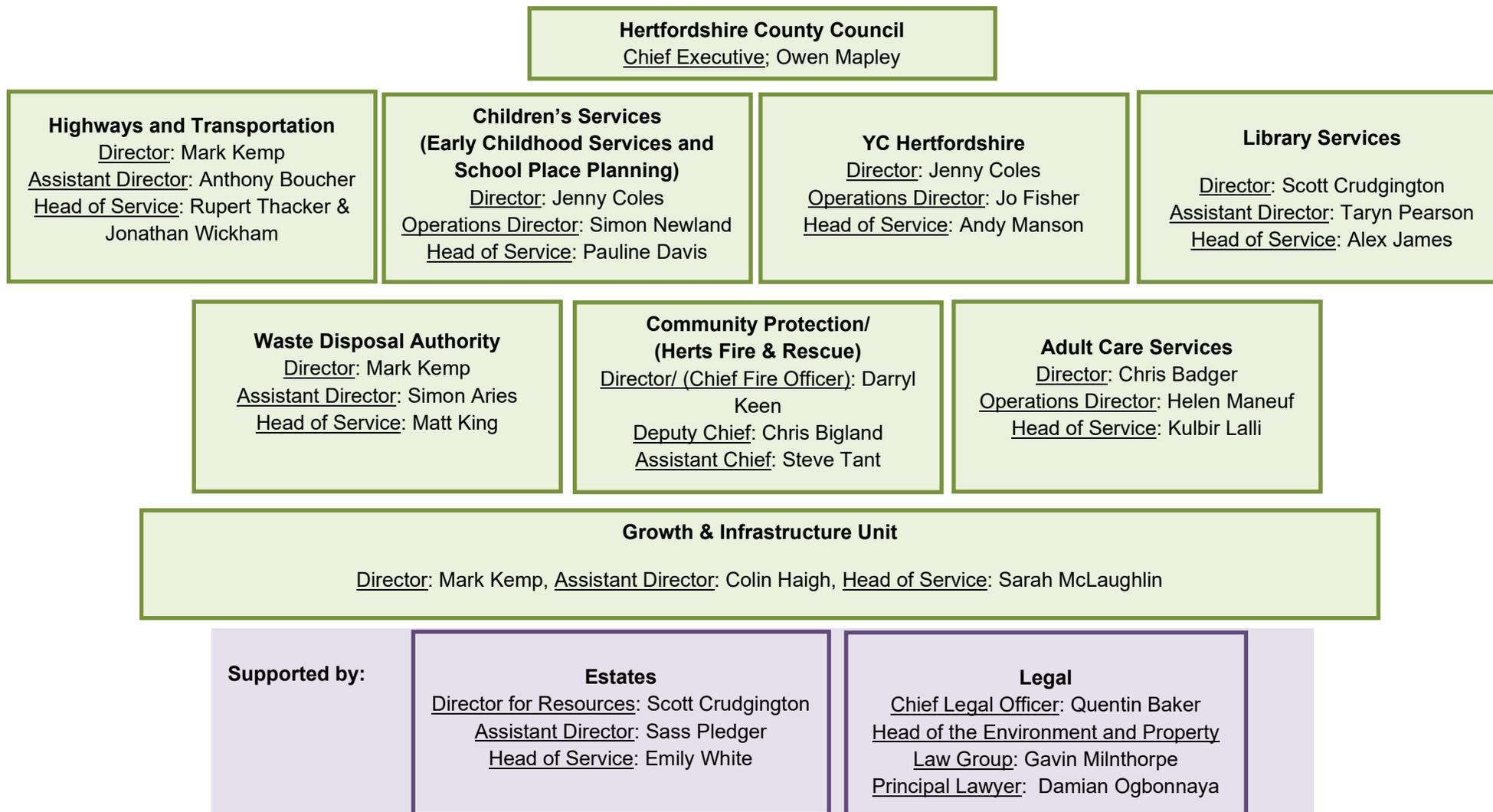
5.5.8 Annual Infrastructure Funding Statements will be published by the county council. If a contribution is not spent within the timeframes identified within the S106 it will be refunded to the relevant party as prescribed within the deed. Information on expenditure can be made available on request.

5.5.9 The county council maintains a register of all planning obligations and follows a clear internal process to approve spend. Its planning obligation processes are regularly audited and if necessary, recommendations made to senior officers to ensure improvements can be made where possible.

Developer Contributions Guidance 2021

Appendix 1 – Contacts

Hertfordshire County Council Service Structures



Hertfordshire County Council Contacts for Developer Contributions

Local Planning Authority	Non-transport services	Transport services	
	Lead: Sarah McLaughlin	Lead: Mark Youngman	Lead: Roger Flowerday
	Growth and Infrastructure Unit	Highways Planning	Local Plans, Strategic Development & Future Transport
	growth@hertfordshire.gov.uk	highwaysplanning@hertfordshire.gov.uk	
North East			Countywide
Borough of Broxbourne Council	Team Leader: Antony Proietti. Supported by: Ben Bowles, Sarah Burgess, Trish Lyons, Christine Perkins, Xavier Preston. Garden Towns: Matthew Wood	Development Manager: Matthew Armstrong. Supported by Senior Development Officers: Ania Jakacka, Roger Taylor and a team of Development Officers.	Development Manager: James Dale. Senior Development Officer: Oliver Sowerby. Development Officers: Adrian McHale, Faye Panah and Jenny Applestone.
East Hertfordshire District Council			
Stevenage Borough Council			
North Hertfordshire District Council			
Welwyn Hatfield Borough Council			
South West			
Dacorum Borough Council	Team Leader: Russell Monck. Supported by: Terri Brooks, Jamie Alderson, Martin Wells and Velda Wong. Garden Towns: TBC.	Development Manager: Alan Story. Supported by Senior Development Officers: Adam Whinnett, Samuel Tearle and a team of Development Officers.	
Hertsmere Borough Council			
St Albans City & District Council			
Three Rivers District Council			
Watford Borough Council			

Hertfordshire Local Planning Authorities:

	Borough of Broxbourne	www.broxbourne.gov.uk 01992 785555
	Dacorum Borough Council	www.dacorum.gov.uk 01442 228000
	East Hertfordshire District Council	www.eastherts.gov.uk 01279 655261
	Hertsmere Borough Council	www.hertsmere.gov.uk 0208 207 2277
	North Hertfordshire District Council	www.north-herts.gov.uk 01462 474000
	Stevenage Borough Council	www.stevenage.gov.uk 01438 242242
	St Albans City & District Council	www.stalbans.gov.uk 01727 866100
	Three Rivers District Council	www.threerivers.gov.uk 01923 776611
	Watford Borough Council	www.watford.gov.uk 01923 226400
	Welwyn Hatfield Borough Council	www.welhat.gov.uk 01707 357000
	Hertfordshire County Council	www.hertfordshire.gov.uk 0300 123 4040

Developer Contributions Guidance 2021

Appendix 2 – Land specification: education

Please refer to the notes below to support work on initial feasibility for the land/build requirement of a new two form of entry (2FE) primary school. For alternative school sizes, please contact Hertfordshire County Council at growth@hertfordshire.gov.uk.

When working with developers on potential new school sites, the county council asks the developers to check the site against the following criteria which forms part of the draft summary terms used for the S106 agreements.

We are aware there may be site issues, such as gradient or drainage, and therefore such issues would need further investigation to clarify suitability of the space for external sports and other school facilities. The investigation findings will assist demonstrating the potential of the site to meet school standards.

Typical standard initial draft - A 'suitable' site being one that is;

- of regular shape;
- relatively flat (not more than 1:20 gradient);
- free of physical landscape or topographical features or other things which might constrain its development and use for its intended purpose;
- the Owner shall provide results of site investigations for the proposed School Land carried out to the relevant current British and European Standards, including BS 5930, BS EN 1997 – 1 BSEN 1997 – 2 and all related standards referred to therein. This shall determine load bearing capacity of soils, soil types (and depths), type and location of any contamination and ground water level;
- insurances through collateral warranties will provide the county council with redress from the provider in the event of error or inaccuracy;
- drainage – there will be a requirement by the approving authorities to provide a drainage strategy. The Owner will design and install a network to facilitate additional and appropriate capacity including surface water storage. A connection will be available at the site boundary. Foul water capacity will be available to the site boundary and will connect to an adoptable drainage system. The connection points for both foul and surface water drainage will be located to avoid the need to provide pumping infrastructure;
- free from contamination (to such extent as is appropriate for the intended use of the site);
- free from any protected species (any appropriate mitigation measures to be wholly completed by the transferor);
- within flood Zone 1;

- noise level of the intended outdoor play areas within British Standard Requirements (based on after construction phase is finished);
- consistent low levels of air pollutants (gases and particulates) likely to adversely impact upon the health and wellbeing of all users. Baseline air quality monitoring of a nature and scope proportionate to the sensitivity of the proposed location and to be agreed by the county council should be undertaken in advance of a planning application; reliance solely upon modelled assessments will not be considered a sufficient method through which the exposure of the school community to poor air quality can be objectively considered;
- having direct access from a highway of an adoptable standard with achievable/viable opportunity for walking and cycling as the preferred mode of travel;
- vacant possession.

Sports England may also direct the approach to design and delivery of outdoor space and, for completeness, up to date Sports England guidance should also be referred to.

The transferor should prepare the necessary survey evidence required for Hertfordshire County Council to be satisfied that the site is suitable for educational use.

Developers/ site promoters are advised to consider access to the education land early in the masterplanning process. The county council would expect consideration of a construction access to the land, and direct access from a highway of an adoptable standard at the point the school becomes operational.

Initial Feasibility

The county council's site standards are based on Department for Education guidance "Area guidelines for mainstream schools: Building Bulletin 103" (BB103).

As each site is different, there must be consideration to town planning requirements and any abnormalities such as:

- highways (access, constraints, improvements) car parking, cycle bays, drop off and turning circles;
- abnormalities leading to site constraints such as; topography, trees, ancient woodland, contaminated land, archaeological remains & ancient monuments;
- sewers, drainage and sustainable drainage such as balancing ponds or swales (which can require considerable land take depending on design);
- fencing and hedging; and/or
- external storage, refuse area and recycling point.

Hertfordshire County Council may require further detailed work to be completed to demonstrate deliverability, for example if significant on-site drainage solutions are required. This will be considered on a site by site basis.

School site sizes

Hertfordshire County Council currently seeks land allocations of the following sizes for new mainstream school locations:

Table 1: Hertfordshire School Land Areas for New Schools: 2021

School Size	Total School Area
Primary 2 Form of Entry School	2.03ha
Primary 3 Form of Entry School	2.92ha
Secondary 6 Form of Entry School	8.36ha
Secondary 7 Form of Entry School	9.57ha
Secondary 8 Form of Entry School	10.78ha
Secondary 9 Form of Entry School	11.99ha
Secondary 10 Form of Entry School	13.20ha

Schools sites are expected to be provided as whole sites, with no barriers to movement. Exceptional circumstances will be considered on a case by case basis. Applicants are urged to seek advice from Hertfordshire County Council to ensure the most up to date information is available.



Minutes
of the
Meeting of the
Cabinet
on
Monday, 12 July 2021

1. **Public Notice 1**
2. **Minutes**
3. **Public Notice 2**
4. **Agenda**
5. **Appendices to Item 13**
6. **Minutes**

Minutes



To: All Members of the Cabinet,
Chief Executive, Chief Officers

From: Democratic & Statutory Services
Ask for: Deborah Jeffery
Ext: 25563

CABINET **12 July 2021**

ATTENDANCE

MEMBERS OF THE CABINET

P Bibby, S J Boulton, M Bright, E H Buckmaster, R C Deering, T L F Douris, T C Heritage,
S N M Nash, R M Roberts (*Leader of the Council*)

Other Members in Attendance

M B J Mills-Bishop

Upon consideration of the agenda for the Cabinet meeting on 21 June 2021 as circulated, copy annexed, conclusions were reached and are recorded below:

PART I ('OPEN') BUSINESS

1. MINUTES

1.1 Cabinet agreed the Minutes of the meeting held on 21 June 2021.

2. QUESTIONS FROM MEMBERS OF THE COUNCIL TO EXECUTIVE MEMBERS

2.1 There were no questions from Members of the Council to Executive Members.

3. PUBLIC PETITIONS

3.1 There were no public petitions.

CHAIRMAN'S INITIALS

.....

The full Cabinet Meeting can be viewed here: [Cabinet - 12 July 2021](#).

4. REGULATION OF INVESTIGATORY POWERS ACT 2000 (RIPA): ANNUAL REPORT 1 APRIL 2020 – 31 MARCH 2021

[Forward Plan Ref: A024/21]

Decision

4.1 Cabinet approved the policies in relation to:

- (a) Directed Surveillance and Covert Human Intelligence Sources, attached at Appendix A to the report;
- (b) Acquisition and Disclosure of Communications Data from Communication Service Providers, attached at Appendix B to the report; and
- (c) Use of Social Media in Investigations, attached at Appendix C to the report.

Reasons for the decision

4.2 The Regulation of Investigatory Powers Act 2000 (RIPA) regulates Directed Surveillance and Covert Human Intelligence Sources. The Investigatory Powers Act 2016 (IPA) regulates the acquisition and disclosure of communications data from communication service providers, including such by local authorities. They were introduced to ensure that individuals' rights are protected, whilst also ensuring that law enforcement and security agencies have the powers they need to do their job effectively.

4.3 The County Council has separate policies on covert investigations, the acquisition and disclosure of communications data, and on the use of social media in investigations. These each require Councillors to consider reports on their use of RIPA and IPA on at least an annual basis, to ensure that they are being used consistently with the Council's policies and that the policies remain fit for purpose. Cabinet has, therefore, received its Annual Report on their use and has approved updated policies for 2021/22.

Any alternative options considered and rejected

4.6 None.

5. DEVELOPER CONTRIBUTIONS GUIDANCE: A REPLACEMENT FOR THE HERTFORDSHIRE TOOLKIT

[Forward Plan Ref: A016/21]

Decision

- 5.1 Cabinet:
- i) approved the final version of the Guide to Developer Infrastructure Contributions (including Technical Appendices) and The Legal Pack (Appendices 1a, 1b and 2); and
 - ii) agreed that the Appendices and Technical Appendices of the Guide can be amended under delegated authority by the Director of Environment and Infrastructure, in consultation with the Executive Member, and (in respect of the Technical Appendices) alongside the relevant Director (or equivalent), in consultation with the Executive Member of the respective County Council service department.

Reasons for the decision

- 5.2 The Planning Obligations Guidance – Toolkit for Hertfordshire (referred to as the Toolkit) was adopted in 2008. The Toolkit outlines the Council’s approach to securing S106 planning obligations on behalf of Hertfordshire County Council services.
- 5.3 The new Guide, attached at Appendix 1 to the report, presents an up to date view of S106 and the integration with Community Infrastructure Levy (CIL). It provides more detail on Council working practices, providing clarity and transparency for developers and our local planning authority partners in a number of areas. The Guide is aimed at all persons involved in town planning processes such as the making of planning applications and particularly professionals such as town planners, surveyors, lawyers and highway engineers working within the County Council, the District/Borough councils and the development industry. It provides information on how the Council will coordinate a response to developer applications and advice on the infrastructure contributions required to mitigate the impact of developments.
- 5.4 In reaching its decision, Cabinet considered the above, together with the financial implications; the equalities implications; the sustainable Hertfordshire impact assessment; and the recommendations of the Growth, Infrastructure & Planning Cabinet Panel.

Any alternative options considered and rejected

- 5.5 None.

- 6. HERTFORDSHIRE COUNTY COUNCIL ADMISSION ARRANGEMENTS FOR 2021/22 AND 2022/23**
[Forward Plan Ref: A031/21]

Decision

6.1 Cabinet agreed that: -

- i) the County Council's admission arrangements for 2021-22 and 2022-23 are varied in line with the requirements of the new School Admissions Code:
 - Rule 1 of the County Council's oversubscription criteria is amended to include all previously looked after children, including **those who appear (to the admission authority) to have been in state care outside of England and ceased to be in state care as a result of being adopted.**
 - The definition and explanation regarding the allocation of places to children of service personnel and crown servants is amended to specifically reflect the new Code
- ii) these variations are conditional on the Code passing through its Parliamentary process (on or around 1 July 2021).

Reasons for the decision

- 6.2 The County Council must determine on an annual basis the admission arrangements and published admission number for all community and voluntary schools in Hertfordshire; and the coordinated schemes of admission to all maintained schools and academies in the county.
- 6.3 The School Admissions Code requires all admission authorities to consult on their admission arrangements (if there have been no changes) every 7 years. Hertfordshire County Council consulted on its admission arrangements for both 2021-22 and 2022-23 and Cabinet then determined arrangements.
- 6.4 The School Admissions Code, paragraph 3.6, only allows admission authorities to vary their admission arrangements in very limited circumstances, if:
“such revision is necessary to give effect to a mandatory requirement of the Code, admissions law, a determination of the Adjudicator or a misprint in the admissions arrangements”
All other revisions (except an increase in a school's Published Admission Number) require the approval of the Office of the Schools Adjudicator.
- 6.5 The new School Admissions Code will be implemented, subject to Parliamentary approval, on 1 September 2021. The County Council is required to vary its determined admission arrangements for 2021-22 and 2022-23, in line with the new Code, before that date.
- 6.6 In reaching its decision, Cabinet considered the above, together with the consultation responses; the financial implications; the equalities implications; the sustainable Hertfordshire impact assessment; and the recommendations of the Education, Libraries & Lifelong Learning Cabinet Panel.

Any alternative options considered and rejected

6.7 None.

7. OUTCOME OF THE PUBLIC CONSULTATION ON THE PROPOSAL TO CHANGE THE AGE RANGE OF OXHEY EARLY YEARS CENTRE TO ENABLE THE SCHOOL TO OFFER NURSERY PROVISION TO 2-YEAR-OLD CHILDREN FROM JANUARY 2022

[Forward Plan Ref: A029/21]

Decision

7.1 Cabinet accepted the proposal to change the age range of Oxhey Early Years Centre to enable the school to offer nursery provision to 2-year-old children from January 2022 and authorised the Director of Children’s Services to publish a statutory notice.

Reasons for the decision

7.2 A public consultation began on 11 May 2021 and ended on 7 June 2021. At the close of the consultation a total of 8 responses were received of which 5 respondents agreed with the proposal, 1 disagreed and 2 were undecided. The school’s governing body responded to the consultation and is in agreement with the proposal.

7.3 The proposal will ensure that 2-year-old children in the community, particularly the most vulnerable, are able to access the free place that they are entitled to.

7.4 In reaching its decision, Cabinet considered the above, together with the consultation responses; financial implications; the equalities implications; the sustainable Hertfordshire impact assessment; and the recommendations of the Education, Libraries & Lifelong Learning Cabinet Panel.

Any alternative options considered and rejected

7.5 None.

8. HERTFORDSHIRE SKILLS AND EMPLOYMENT STRATEGY 2021-24

[Forward Plan Ref: A026/21]

Decision

8.1 Cabinet noted the work undertaken by Hertfordshire County Council, the Local Enterprise Partnership (LEP) and the Department for Work and Pensions (DWP) adopted the Skills and Employment Strategy, including but not limited to:

- i) by unlocking emerging talent with support for young people aged 16-24 years.
- ii) through adult learning and employment, working towards full employment, promoting lifelong learning and retraining opportunities
- iii) skills to grow small and medium size businesses, enabling employers to build their future workforce
- iv) priority and growth sectors, harnessing the opportunities and investing in skills of the future
- v) placemaking, seizing the opportunities of Hertfordshire's business assets together with the proximity to London and other key economic areas

Reasons for the decision

- 8.2 The aim of the strategy is to ensure the county's skills provision addresses the local skills challenges and opportunities and meets the employment needs of the future, whilst supporting all residents to reach their potential.
- 8.3 The need for collective leadership on skills development remains and the County Council, together with the Hertfordshire Local Enterprise Partnership (LEP) and the Department for Work and Pensions (DWP) will continue the partnership approach of developing and implementing the strategy.
- 8.4 The strategy is a joined-up approach to develop Hertfordshire's workforce to support a strong economy where businesses can thrive, whilst enabling all residents to maximise their potential.
- 8.5 In reaching its decision, Cabinet considered the above, together with the financial implications; the equalities implications; the sustainable Hertfordshire impact assessment; and the recommendations of the Education, Libraries & Lifelong Learning Cabinet Panel.

Any alternative options considered and rejected

- 8.6 None.

9. OUTTURN FINANCE BUDGET MONITOR

[Forward Plan Ref: A011/21]

Decision

- 9.1 Cabinet approved the following:
- i) The proposed carry forward amounts including ring-fenced funding, attached at Appendix B to the report;
 - ii) The proposed application of the final outturn underspend and unallocated COVID-19 emergency funding; and
 - iii) The proposed reprogramming of capital budgets, attached at

Reasons for the decision

9.2 Cabinet approved the carry forward amounts and recommended re-programming in order to continue to support the delivery of key capital investments in Hertfordshire during 2021/22.

Any alternative options considered and rejected

9.3 None.

10. COVID-19 RECOVERY STRATEGY

Decision

10.1 Cabinet:-

- i) noted the progress made to date on developing a Covid-19 Recovery Strategy;
- ii) approved the proposed two-stage approach to delivering the strategy; and
- iii) approved the initial investment of £9.6m to support Covid-19 recovery

Full Council will be invited to endorse the proposals at its meeting on 20 July 2021.

Reasons for the decision

10.2 Over the past eighteen months, the Council has been working closely with its strong network of partners to ensure Hertfordshire's residents and businesses can live and work as safely as possible, as the Council responds to the unprecedented challenges brought about by the global Covid-19 pandemic. As the focus starts to move beyond immediate responses to the crisis, it is critical that a clear plan is in place to ensure that services are effectively restored, and the Council help our communities recover from the impacts of the pandemic. This work will build on the lessons learned and opportunities to further innovate services, so they are fit for the future.

10.3 Work has now begun to develop a strategy that sets out the Council's recovery from the challenges and pressures faced in Hertfordshire. The strategy is being developed alongside the urgent, immediate responses and recovery projects that are already in progress. It is not intended to duplicate or re-work any existing recovery plans.

10.4 The Strategy provides an overview of the next steps that the Council and partners will take to drive local recovery and describes the short-term priorities

**CHAIRMAN'S
INITIALS**

.....

and longer-term ambitions, specifically focusing on managing the emerging issues across Hertfordshire.

- 10.5 As part of the Integrated Plan approved in February 2021, funding was established to support recovery actions. A total of £11.5m was set aside, comprising an initial sum of £5.5m in 2021/22 and £2m in each of the subsequent three years.
- 10.6 Full Council will be invited to endorsement the proposal of the initial investment of £9.6m to support Covid-19 recovery, and the actions that investment will support at its meeting on 20 July 2021.
- 10.7 In reaching its decision, Cabinet considered the above, together with the financial implications; the equalities implications; and the recommendations of the Resources & Performance Cabinet Panel.

Any alternative options considered and rejected

- 10.8 None.

11. COVID LOCAL SUPPORT GRANT

Decision

- 11.1 Cabinet noted the £2.3m additional funding from the Governments Local Support Grant for Hertfordshire and agreed:
- (i) £1,720,000 to be allocated through a £50 voucher to support all children in families facing financial difficulties, defined as those currently in receipt of benefit-dependant Free School Meals, and those who meet the national criteria for free two-year-old education and childcare, and for Early Years Pupil Premium;
 - (ii) £445,000 allocation of funding to support adults;
 - (iii) £194,850 other support for families and children.

Reasons for the decision

- 11.2 Hertfordshire County Council has been allocated a further £2.3m of Covid Local Support Grant from the Department of Work and Pensions (DWP) for the period from 21 June to 30 September 2021. This follows on from earlier phases of Covid Winter Support Grant (£2.9m for Dec – March) and Covid Local Support Grant (£1.1m for April – June).
- 11.3 The DWP has confirmed that this will be the final allocation of this grant, bringing it in line with the ending of the furlough scheme. Notice of the grant extension was received on 22 June 2021, and in order to issue vouchers before the end of term, schools will need time before the end of term to process this.
- 11.4 Cabinet considered the above, together with the financial implications and the

equalities implications when making its decision.

Any alternative options considered and rejected

11.4 None.

12. ADDITIONAL SCHOOL PLACES – THE PRIORY SCHOOL, HITCHIN
[Forward Plan Ref: A030/21]

Decision

12.1 Cabinet:

- (i) approved the capital costs of The Priory School enlargement (contained within the Part II Report);
- (ii) authorised the Director of Children’s Services to enter a Funding Agreement with The Priory School, Hitchin, to enable it to permanently enlarge to 7fe from September 2023; and
- (iii) approved the allocation of s106 funding secured for the enlargement of The Priory School, and to other previously approved schemes as contained in Appendix 1.

Reasons for the decision

12.2 The Council has been working with The Priory School in Hitchin to agree the provision of an additional 1 form of entry of permanent capacity through its enlargement to 7fe.

12.3 The School’s determined Published Admission Number (PAN) is 180. Although it has offered over its PAN in recent years, it has insufficient permanent accommodation to accommodate an increase in the number of places it offers and therefore capital funding approval is sought to enable the School to deliver a building scheme which provides the right level of additional accommodation to meet its increased PAN.

12.4 The enlargement of The Priory School will meet the forecast need for additional secondary school places in the area.

12.5 In reaching its decision, Cabinet considered the above, together with the information within the Part II report; the financial implications; the equalities implications; the sustainable Hertfordshire impact assessment; and the recommendations of the Education, Libraries & Lifelong Learning Cabinet Panel.

Any alternative options considered and rejected

12.6 None.

**CHAIRMAN’S
INITIALS**

.....

13. ACQUISITION OF BROOKDELL YARD, WATFORD, ADJACENT TO WATERDALE RECYCLING CENTRE, WATFORD, TO ENLARGE CAPACITY OF FACILITY TO ENSURE LONG TERM FUTURE OF SERVICE

[Forward Plan Ref: A028/21]

Decision

13.1 Cabinet:

- i) recommended to County Council that it approves the amendments to the Capital Strategy outlined in Section 5 and Appendix A to the report to enable the scheme to be added to the 2021/22 Integrated Plan;
- ii) subject to County Council approval of 13.1(i) above, approves the acquisition of Brookdell Goods Yard; and
- iii) delegates authority to the Director of Resources in consultation with the Executive Member for Resources and Performance, the Director of Environment and Infrastructure and the Executive Member for The Environment to agree final terms of the purchase.

Full Council will be invited to approve the amendments at its meeting on 20 July 2021.

Reasons for the decision

13.2 The Hertfordshire Local Authority Collected Waste (LACW) Spatial Strategy sets out the requirement to invest in the Waterdale Waste Transfer Station and the potential for short, medium and long-term improvements that would substantially improve the resilience of the network and develop Hertfordshire's ability to sustainably manage its waste.

13.3 The Brookdell site sits immediately to the south of Waterdale and represents a once in a lifetime opportunity to expand and reconfigure the site to provide necessary operational improvements and safeguard the most significant asset for waste management in Hertfordshire.

13.4 In reaching its decision, Cabinet considered the above, together with the information within the Part II report; the financial implications; the equalities implications; the sustainable Hertfordshire impact assessment; and the recommendations of the Resources & Performance Cabinet Panel.

PART II ('CLOSED') AGENDA

- 1. ADDITIONAL SCHOOL PLACES – THE PRIORY SCHOOL, HITCHIN**
[Forward Plan Ref: A030/21]

Decision

- 1.1 The Part I decision reached on this item of business is recorded at item 12.1 above. The Part II decision reached on this item of business is recorded in the separate Part II Minutes.

- 2. ACQUISITION OF BROOKDELL YARD, WATFORD, ADJACENT TO WATERDALE RECYCLING CENTRE, WATFORD, TO ENLARGE CAPACITY OF FACILITY TO ENSURE LONG TERM FUTURE OF SERVICE**
[Forward Plan Ref: A028/21]

Decision

- 2.1 The decision reached on this item of business is set out at item 13.1 above.

QUENTIN BAKER
CHIEF LEGAL OFFICER

CHAIRMAN _____

CHAIRMAN'S
INITIALS

.....

This page is intentionally left blank

Hertfordshire County Council

A Guide to the Hertfordshire Demographic Model



2021



Contents

Section	Title	Page
1.0	Introduction	3
1.1	The Hertfordshire Development Model	5
1.2	How the Model Operates	8
1.3	Model Outputs	11
1.4	Calibrating the Demographic Model with the PYS	12
1.5	Conclusion	18
Appendix 1	Other methods for the projection of population arising from new build developments	19
Appendix 2	Application of the 2011 Census All Households and Migrant Households data tables	27
Appendix 3	How the development model operates	39
Appendix 4	The model worksheets	48

1.0 Introduction

HCC has a number of roles to deliver local infrastructure and as such is required to ensure that the impact of new development is mitigated in a number of areas. In order to determine likely levels of service(s) uptake, appropriate developer obligations and, to inform a strategic overview, HCC requires a method of projecting the populace likely to arise from new development. HCC has therefore established a Development Model (hereinafter referenced as “the model”).

The model provides HCC with the necessary baseline evidence to support a request for planning obligations through the appropriate mechanism. It ensures that HCC is able to meet the 3 tests in respect of planning obligations, namely: that they are necessary to make the development acceptable in planning terms, directly related to the development, and fairly and reasonably related in scale and kind.

Information relating to pupil yield, across all school age stages, from new build housing is necessary for assessing schools capacity and the potential development of new schools. New housing developments can place additional pressures on school places through inward migration into an authority and by the redistribution of the existing population into areas where existing schools are at capacity or are not located within a reasonable distance.

Hertfordshire County Council (HCC) is the Local Authority with responsibility for **Education** and as such has a statutory responsibility for the provision of education services including sufficient school places for nursery, primary, secondary and sixth form age pupils. Provision must also be made available for children with special needs and sufficient child care spaces in the early year’s sector.

As Local **Libraries** Authority, HCC has a duty to provide a comprehensive and efficient library service for everyone who lives, works, or studies in the County under the 1964 Public Libraries and Museums Act. It is committed to maintaining and modernising its libraries to continue to meet the changing needs of service users and to cope with additional demand brought about by new development.

Legislation¹ requires that local authorities have a “responsibility to ensure young people have access to sufficient educational leisure-time activities which are for the improvement of their well-being and personal and social development, and sufficient facilities for such activities; that activities are publicised; and that young people are placed at the heart of decision making regarding the youth work / positive activity provision.”

The focus of HCC **Youth** Connexions is prevention and early intervention. It supports young people by providing high quality informal education opportunities to promote young people’s personal and social development, enabling them to make informed decisions, have a place in their community and ultimately, to reach their potential and make a successful transition to adulthood.

The Hertfordshire **Fire and Rescue** Service (HFRS) has two major functions - keeping people safe through community fire safety initiatives [Prevention & Protection] and saving lives through operations [Response].

As Fire Authority, Hertfordshire County Council is responsible for making arrangements to obtain the necessary information for the purposes of: providing a swift and effective 24/7 emergency response to: extinguish fires, with the aim of protecting life and property; rescuing people from road traffic collisions, water and height; and dealing with other emergencies such as wide-area flooding, chemical incidents and large animal rescues. HFRS also play a major role in civil protection, working in partnership with other public bodies and private sector organisations to ensure an integrated approach to dealing with large scale civil emergencies.

Hertfordshire County Council, as the **Waste** Disposal Authority (WDA), is responsible for the disposal of almost 530,000 tonnes of Local Authority Collected Waste (LACW) produced by Hertfordshire's residents each year. This waste is either collected at the kerb side by the district and borough councils in the role of the Waste

¹ The Education and Inspections Act 2006, Part 1, Section 6: Education Act 1996, Section 507B.

Collection Authorities (WCAs) or deposited by residents at Household Waste Recycling Centre's (HWRC's).

Hertfordshire County Council as the Local **Highway** Authority is responsible for providing a safe, efficient and resilient transport system that serves the needs of business and residents across Hertfordshire and minimises its impact on the environment.

The County Council will make best use of the existing road network and where necessary, introduce targeted schemes to deliver a reliable and readily useable transport network which encourages economic growth and allows access for everyday facilities. The County Council promotes and supports sustainable travel to help reduce car traffic and contribute to improved health and quality of life.

The methodology for this work is supported by the COMET model which is a countywide multi-modal transport model. COMET provides information on current travel patterns across Hertfordshire and will be used to consider the future impact on travel patterns and areas of congestion based on expected areas of growth. Highways impacts are not considered within the Development Model.

Increased levels of development ultimately have an impact on HCC services. The model provides a projection of residents likely to occupy a particular development and this document provides an overview of the model applied by the authority, the outcome of which informs discussions with developers to understand how best to mitigate the impact on HCC services.

1.1 The Hertfordshire Development Model

In Hertfordshire, a model has been developed by the HCC Property Intelligence Services Team. The model operates based on 2011 census data tabulated by dwelling size (number of bedrooms), type and tenure for All Households and Migrant Households customised outputs. The model allows for the population likely to be resident in a new development to change with time and for the overall population to conform to an age structure in line with the wider community.

HCC recognises that demographic modelling can be approached using a variety of different methodologies, discussed further in Technical Appendix 1, however the authority considers the Development Model to be appropriate as:

- The process of creating the customised table outputs incorporated into the HCC model involves the base data passing ONS Statistical Disclosure Controls (SDC) and as such the data are considered robust and non-identifying.
- A census is considered the most comprehensive and accurate survey of the population and it's characteristics at the time it is taken, local authority average person and household response rates within Hertfordshire (95% and 96% respectively) were higher than that reported for England overall (94% and 95% respectively).
- Specific consideration is taken of the demographic characteristics of wholly moving (Migrant) households which differ substantially to that of the population of the whole (All Households). Cohorts are aged "year on year" as a development progresses and therefore provide a more accurate projection of likely populace than other methods such as those which apply a flat or average yield per 100 dwelling rate.

The model is based on hierarchical data sourced from the Office for National Statistics (ONS) as customised table outputs for the geography of the area covered by Hertfordshire County Council. Detail on how the census tables are applied within the model is available in Technical Appendix 2. The ONS produced, upon commission by the authority, the following four customised table outputs²:

- CT0173 - Tenure of household by accommodation type by number of bedrooms – All Households - *All occupied households in unshared dwellings (excluding caravans and other mobile or temporary structures).*
- CT0174 - Tenure of household by age by accommodation type by number of bedrooms – All Households - *All usual residents living in households in*

² These tables are publicly and freely available upon request from the Office for National Statistics via: Census.CustomerServices@ons.gsi.gov.uk or can be downloaded from their published census data sets.

unshared dwellings (excluding caravans and other mobile or temporary structures).

- CT0478 - Tenure by bespoke accommodation type by number of bedrooms – Migrant Households - *Wholly moving households (excluding caravans/temporary structures) in unshared dwellings.*
- CT0479 - Age by tenure by bespoke accommodation type by number of bedrooms – Migrant Households - *All usual residents living in wholly moving households (excluding caravans/temporary structures) in unshared dwellings.*

Following ONS policy the data tables are publicly and freely available from their website. Data contained within these tables is identical in dwelling and person counts to requests made to the ONS by consultants for similar outputs although of aggregate age groups, for example CTO-339 and CTO-324 also available on the ONS website.

The model can operate at different levels of complexity to account for the level of information available at any given point in the planning application process. The more detail provided for input into the model, the more detailed the result:

- **Unit numbers** –this level of data represents the projected population wherein the least amount of data with regard to a development is known (typically the total development size only) although consideration can also be given to a specific bed size mix. This data level is beneficial in providing a strategic overview of likely demand for proposed District housing development with a long projection horizon where the application of a specific detailed mix is inherently rigid and questionable.
- **Unit numbers and the type of unit mix** – this level of data represents the projected population wherein the type mix of the overall unit number is also known, so consideration is also given to the type of proposed dwelling (house or flat) by bed size.
- **Unit numbers and the type & tenure of unit mix** – this level of data represents the projected population wherein the most detailed level of

information is available with regard to overall unit number, dwelling bed size, type and tenure.

1.2 How the model operates

The 2011 Census customised data outputs for All Households and Migrant Households provides information relating to the number of persons by age versus total number of households, or it can be drilled down by bed size, type and tenure (or any combination thereof). These tables, of which there are 330 in total (165 each for All Households and Migrant Households), provide the underlying raw data used in calculating population by sector, and by varying level of detail, from each of the detailed approaches applied by Hertfordshire County Council (Section 1.1).

The approach that HCC applies in projecting the number of people likely to be resident within a given development is dependent upon the level of information available for each particular development. However, there is a commonality in that the methodology is dependent on the ONS customised table outputs as their base data, although to varying degrees of detail, and the calculation processes are generally identical. Figure 1 illustrates the broad process for the model whilst Figure 2 displays the model main screen.

Two pieces of information are critical to the model operation: the development overall size (the total number of dwellings it is proposed to construct) and the trajectory (the number of dwellings completions per annum). Figure 2 displays the model main input screen where a user enters the available proposed development details. For instances where only the number of proposed units is known the entry table allows the user to enter only the Development Size. Additional detail such as bed size mix, type and tenure for a proposed development can be provided when known in order to refine projected population yields. When the development details are complete the user selects the button to enter the trajectory data as displayed in Figure 3. The trajectory may be provided by the applicant or, where not provided, based on a reasonable assumption given consideration of the total development size.

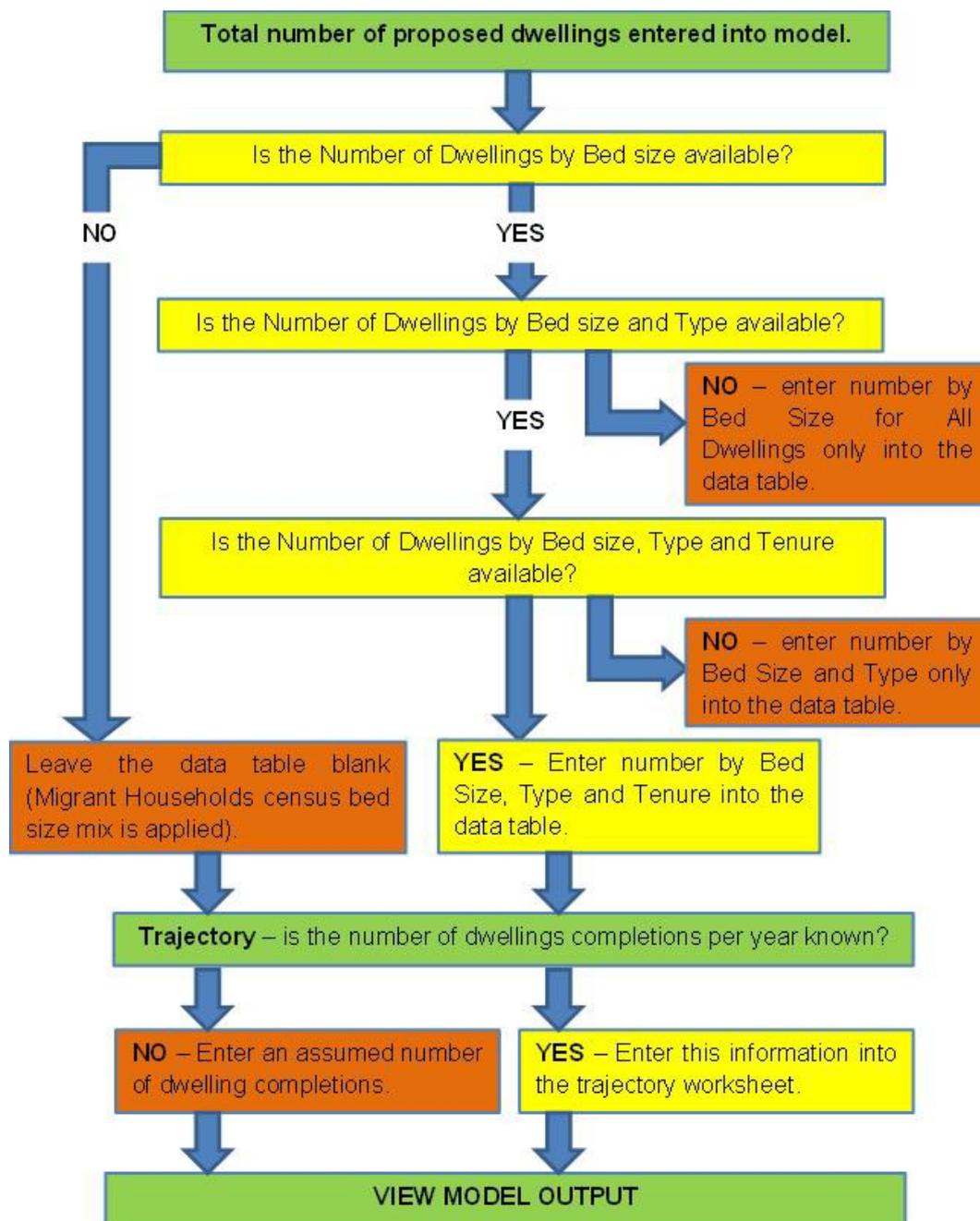


Figure 1. The Hertfordshire Development Model broad processes.

Select the Geography using the pick list: **GEOGRAPHY** County

Select the Area using the pick list: **AREA** Hertfordshire

View Data Source | View Output
View Finance Output | View Summary Print

SITE NAME:
APPLICATION REF:

This model is primarily to be used on large scale developments (over approx. 300 dwellings). However more detailed analysis options are available using the check boxes below.

Development Mix by Tenure and Size			
HOUSES		FLATS	
Number of bedrooms	A) Open Market	A) Open Market	B) Affordable (Social Rent)
1	22	150	70
2	124	168	35
3	216	14	3
4+	126	3	1
Total	488	335	109

Auto Totals appearing here must equal the Development Size entered below

Total Affordable (Social)	177
Total Open Market	823
Overall total	1000

Development Size: **1000**

Combined Proportions	
Number of bedrooms	% based on development mix (auto calc)
1 bed	25.1
2 bed	35.0
3 bed	26.5
4 bed	13.4
Total	100.0

IMPORTANT NOTE: If a development total number of dwellings is known and the percentage split by bed size is also known then, for the Hertfordshire Model only, the number of dwellings by bed size can be manually calculated and entered into the "Development Mix by Tenure and Size" box above. As the Hertfordshire Model does not take account of Type or Tenure then the data can be entered as either houses or flats; the check boxes at the bottom of the page must be unchecked.

Start Year of Development: **2016**
6th Form Stay on Rate: **86%**

Trajectory of Development: Select to enter Trajectory data

Important Note: Trajectory data MUST be entered - do not proceed with yield calculations for any of the models until this step has been completed.

ADDITIONAL ANALYSIS OPTIONS

HOUSES AND FLATS BY BEDROOM SIZE WITH NO TENURE.
 Tick the check box to include an analysis of child yield when considering Houses and Flats separately, irrespective of Tenure, with consideration of number of Bedrooms. Note that the Development Mix table must be completed (number of dwellings for houses and flats can be entered into either the Private or Social housing columns as Tenure is not considered).

HOUSES AND FLATS BY BEDROOM SIZE AND BY TENURE (PRIVATE AND SOCIAL).
 Tick the check box to include an analysis of child yield when considering Houses and Flats separately, with consideration of Tenure (Private and Social housing) and number of Bedrooms. Note that the Development Mix table must be completed, the number of dwellings for houses and flats must be entered into their correct respective columns).

Figure 2. The model main screen for proposed development data entry.

Trajectory of Development (Enter Completions Per Annum)

Return to Illustrative Mix | View Output

No Tenure Check	Tenure Check	Unit Numbers Only							Unit Numbers and Type				Unit Numbers and Type & Tenure			
		Overall (1000 to enter)	Rolling Total	Houses (556 to enter)	Flats (444 to enter)	Houses OM (488 to enter)	Houses Social (68 to enter)	Flats OM (335 to enter)	Flats Social (109 to enter)	Houses OM	Houses Social	Flats OM	Flats Social			
OK	OK	2016	150	150	83	67	73	10	51	16						
OK	OK	2017	150	300	83	67	73	10	51	16						
OK	OK	2018	150	450	83	67	73	10	51	16						
OK	OK	2019	150	600	83	67	73	10	51	16						
OK	OK	2020	150	750	83	67	73	10	51	16						
OK	OK	2021	150	900	83	67	73	10	51	16						
OK	OK	2022	100	1000	58	42	50	8	29	13						
OK	OK	2023	0	1000	0	0	0	0	0	0						
OK	OK	2024	0	1000	0	0	0	0	0	0						
OK	OK	2025	0	1000	0	0	0	0	0	0						
OK	OK	2026	0	1000	0	0	0	0	0	0						
OK	OK	2027	0	1000	0	0	0	0	0	0						
OK	OK	2028	0	1000	0	0	0	0	0	0						
OK	OK	2029	0	1000	0	0	0	0	0	0						
OK	OK	2030	0	1000	0	0	0	0	0	0						
OK	OK	2031	0	1000	0	0	0	0	0	0						
OK	OK	2032	0	1000	0	0	0	0	0	0						
OK	OK	2033	0	1000	0	0	0	0	0	0						
OK	OK	2034	0	1000	0	0	0	0	0	0						
OK	OK	2035	0	1000	0	0	0	0	0	0						
OK	OK	2036	0	1000	0	0	0	0	0	0						
OK	OK	2037	0	1000	0	0	0	0	0	0						
OK	OK	2038	0	1000	0	0	0	0	0	0						
OK	OK	2039	0	1000	0	0	0	0	0	0						
		Total	1000		556	444	488	68	335	109						
		IM Data	1000		556	444	488	68	335	109						

Column Error Checks for Entered Trajectory Data

Combined Model	Proceed to Model Output
Houses (No Tenure)	Proceed to Model Output
Flats (No Tenure)	Proceed to Model Output
Houses (OM)	Proceed to Model Output
Houses (Social)	Proceed to Model Output
Flats (OM)	Proceed to Model Output
Flats (Social)	Proceed to Model Output

The Row Error check ensures that (A) the sum of the Type (House and Flats) trajectory, where values are greater than zero, matches that of the "Combined Model" trajectory and, (B) the sum of the Tenure trajectory, where values are greater than zero, matches that of the Combined trajectory. Where this is the case respectively then the cell will display "OK" with a green background. Where this rule is not satisfied then a cell value of "Error" will be displayed on a red background. All row totals must equate prior to proceeding to the model outputs.

The Type and Tenure Trajectory data to be entered. The number of dwellings required to be entered is displayed in brackets.

HELP: Select the button below to enter a potential House and Flat Trajectory based on the overall proportion of each type relative to the total development size. Some minor amendments may need to be manually made. Will only function when Combined Model trajectory is entered first.

Enter Potential House and Flat Trajectory

Where the trajectory for the development is complete, or there is no dwelling count to be entered for a particular model, then a zero value must be entered into all (further) cells within the respective column. Cells becoming highlighted in yellow indicate a difference in trajectory row totals that will need to be amended before proceeding.

HELP: Select the button below to enter a potential House and Flat Trajectory by Tenure. Note that some amendments may need to be manually made where Res Error cells appear, this is due to rounding of calculated potential trajectories.

Enter Potential Tenure Trajectory

The Trajectory Totals must equal that entered into the Illustrative Mix worksheet otherwise cells will turn yellow to indicate differences.

All Error Checks must display "Proceed to Model Output" before proceeding to the output Child Yield Graphs. This section checks the entered trajectory total against the sum entered into the Illustrative Mix worksheet. Should an error be displayed in the trajectory then calculated child yields may be inaccurate.

Figure 3. The model trajectory sheet with conditional format error checking.

The model has the functionality to include very detailed trajectories but in most instances an applicant may not have a high level of detail on trajectories for individual types and tenures. The user is able to input a high level trajectory and allow the model to calculate the more detailed scenarios by applying a proportional split between the houses and flats across type and tenure.

1.3 Model outputs

The model uses the number of dwellings by bed size to calculate single dwelling population yield values as determined from the Census Migrant Household data. These yield figures are then multiplied by the dwelling percentage representation by bed size in order to calculate a yield per 100 dwellings by age. The yield per 100 dwellings values by age are linked to the underlying model sheets which utilise the build trajectory to calculate the number of persons by age as the development progresses. Technical Appendix 3 provides further detail on the specifics of the model process. Model outputs are both tabular and graphed. Figure 4 displays the graphed projected population yield output for a selected age range – for example primary education. More detail on the worksheets that sit behind the model is available in Technical Appendix 4.

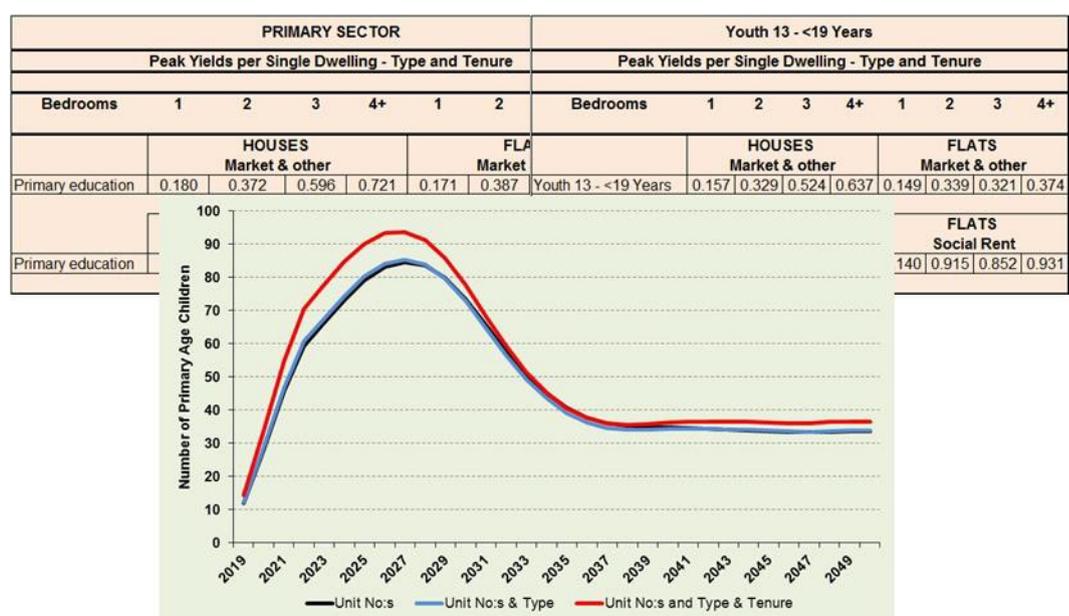


Figure 4. The graph and tabular model outputs for population yielded from a proposed development for a selected age group.

1.4 Calibrating the Demographic Model with the PYS

The scope of the authority PYS provides an excellent observed statistical base to which HDM mainstream pupil projections can be compared using “real world” new build development aggregations for which yields are known.

Comparison between the HDM and PYS was conducted using the PYS 59 cohort; this cohort has previously been used to determine mainstream pupil yields associated with the emerging development typology classification adopted for use at the Local Plan stage. The PYS 59 cohort consists of 6,261 new build dwellings overall of which 1,220 (19.2%), 2980 (46.8%) and 2,161 (34%) were observed in Tier 1, Tier 2 and Tier 3 developments respectively. Comparisons in yields were conducted for all Tiers and for the cohort overall. The following typology Forms of Entry (FE) to dwellings counts, and within tier average development mixes, were observed from previous work:

- Tier 1, 1FE primary per 400 dwellings: *These sites are typically greenfield sites with a dominance of houses (typically 80/20 houses/flats), a higher proportion of 3+ bed properties and a higher proportion of detached or semi-detached houses. There tends to be a dwelling unit density of 22 to 40 per hectare (dph).*
- Tier 2, 1FE primary per 500 dwellings: *These sites are typically PDL with a mix of houses and flats, and a higher proportion of terraced, maisonettes or flats. There is generally a 50/50 Split between smaller (1 & 2-bed) and larger (3-bed+) family homes, while houses are most likely to be terraced. There tends to be a dwelling unit density of 40 to 60 per hectare (dph).*
- Tier 3, 1FE per 1,000 dwellings (excluding Watford)¹: *These sites are typically PDL with a dominance of 1-2 bed properties and are mainly flatted developments (at least 75% flats). There tends to be a dwelling unit density of ≥ 60 per hectare (75 to 100 is quite common).*

Figure 1 displays an example output of primary mainstream yields projected for Tier

¹ Flatted developments in Watford produce abnormally high yields when compared to similar sites in other Hertfordshire authorities. A different strategic planning ratio is therefore applied to Tier 3 developments in Watford when assessing local plan growth scenarios.

1 developments versus that observed from the PYS. It can be observed that, in this instance, the accumulation of mainstream yields follows a consistent pattern with that projected from the HDM. There was a 4.1% difference in the HDM peak yield to the current PYS Tier 1 cohort count, it should be noted however that yields are still annually increasing although at a decreasing rate. It is anticipated that PYS yields will increase further in 2021 either narrowing the gap to the HDM projections or, for Tier 1 developments, surpassing HDM forecasts.

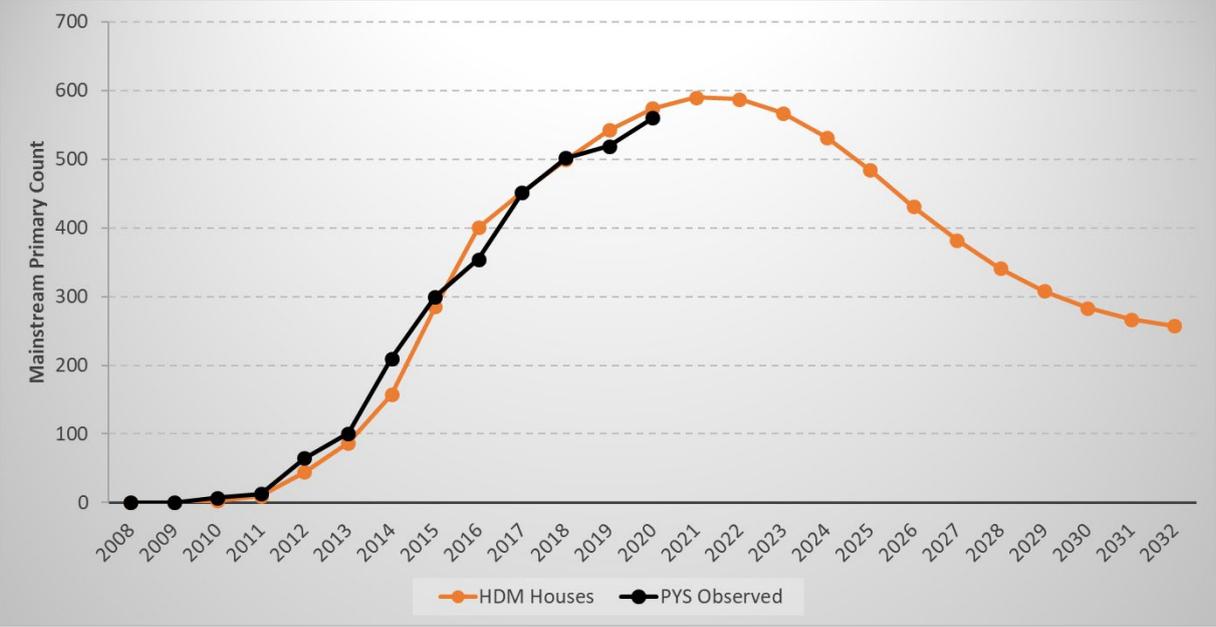


Figure 1. Typology Tier 1 PYS observed primary mainstream pupil counts versus HDM projected applying the aggregate development dwelling type, bed size and, tenure mix (Type Outputs).

Whilst HDM projected mainstream primary yields were close to that observed in Tier 1 developments a higher degree of variance was observed with Tier 2 and 3. Generally as the percentage contribution of houses to a mix decreased, and conversely a higher contribution of flats, then the larger the difference between the HDM projected primary mainstream yields and that observed from the PYS. Provisional evidence indicates that this likely occurs due to a higher level of resident churn (in and out movements) within Tier 2 and 3 in conjunction with lower proportions of AR/SR in contrast to Tier 1 (primarily for the flatted element). Functions were incorporated into the HDM to provide an indication of typology for an entered mix based on the typology classifications listed above. HDM projected

mainstream yields are subsequently reduced according to the typology-based Type and Tenure (highest level of detail) differences observed between PYS and HDM. The percentage reduction applied to a specific mix is not set to the Tier average difference observed for that typology but rather on a linear interpolated reduction related to the percentage contribution of houses to the entered mix. For example, a development is entered to the HDM from which the mix indicates a Tier 1 proposal such that: *there is a dominance of houses (typically 80/20) and a higher proportion of 3+ bed properties*. However, the representation of larger family houses is less than that observed from the PYS Tier 1 cohort and it can logically be expected that the percentage difference to the HDM projections will be greater and lie between the Tier 1 average reduction and that of Tier 2.

The higher difference occurs due to a lower representation of larger, higher yielding, family dwellings. The percentage reduction point is determined by the linear interpolation of the applied reduction between the known percentage contribution of Tier 1 houses to the known percentage contribution of Tier 2 and/or Tier 3 houses and the calculated percentage difference to the HDM. The interpolated value based on a proposal mix is applied to reduce HDM projected mainstream yields accordingly, outputs are therefore specific to each unique development (Figure 2).

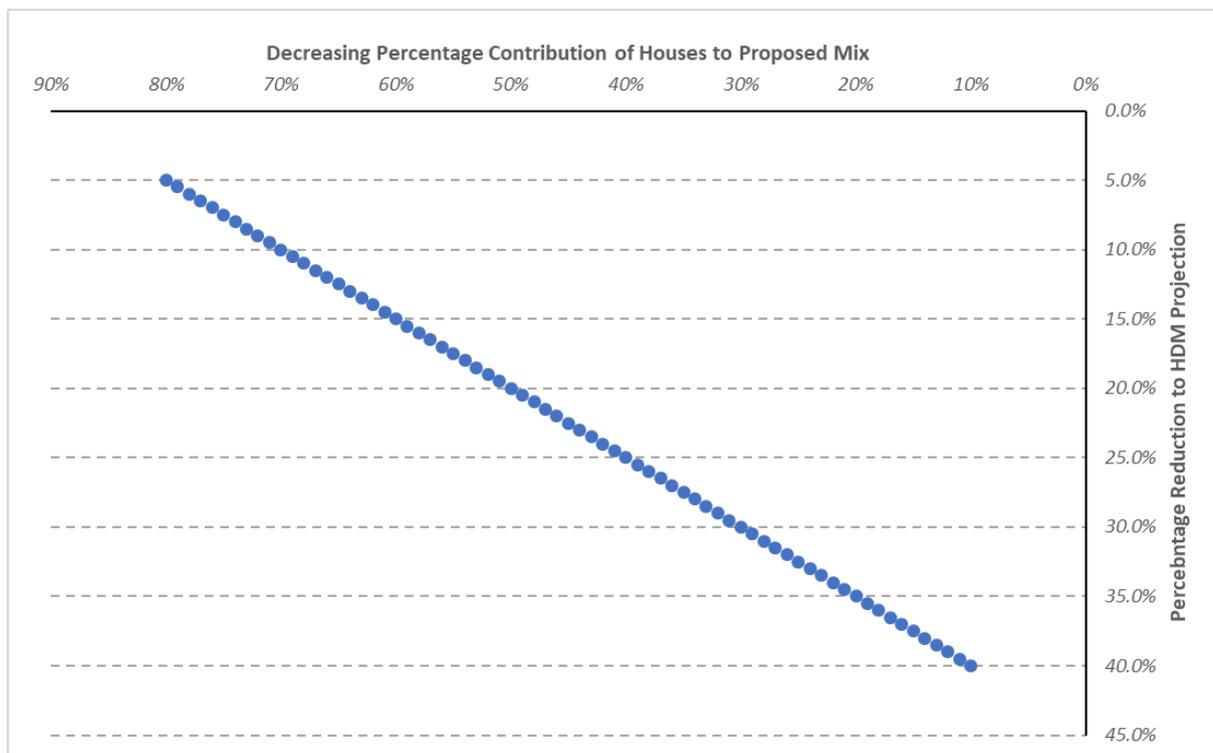


Figure 2. Example increasing percentage reduction to the HDM mainstream

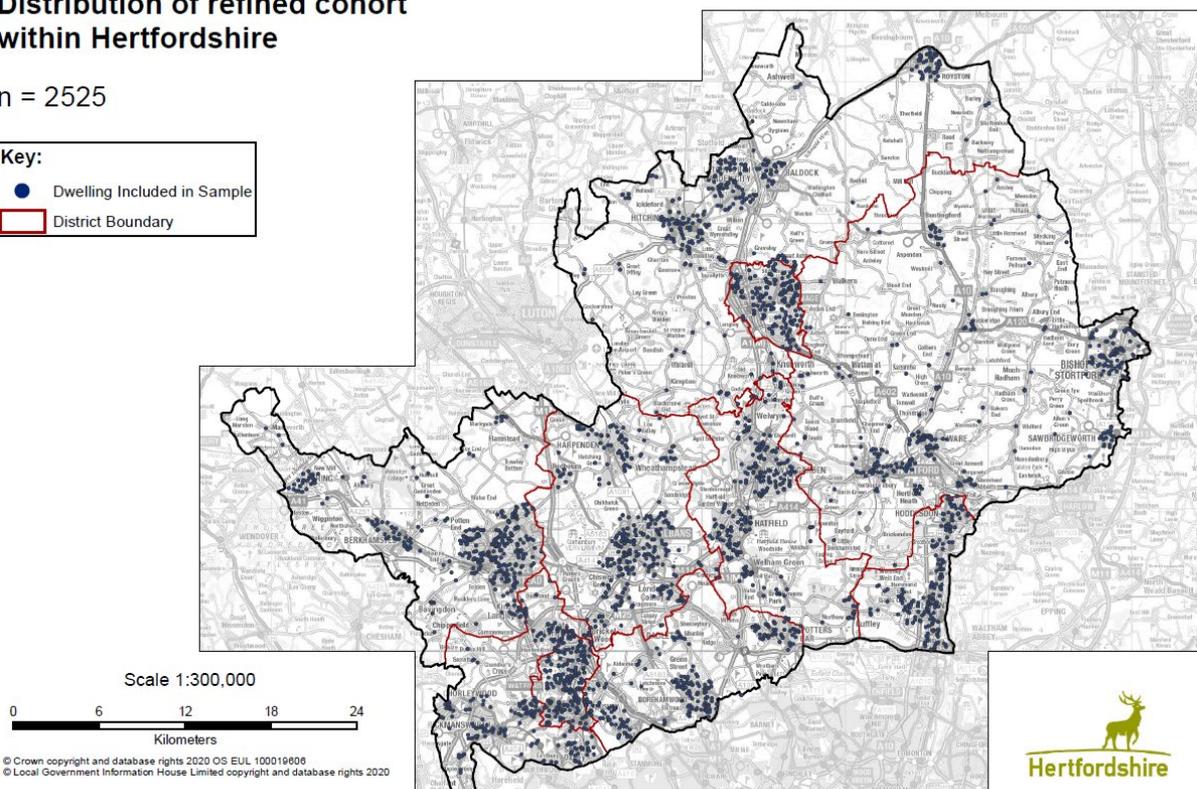
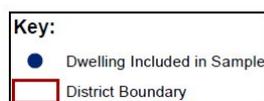
education outputs with decreasing representation of houses to a proposed mix (data is for illustration of method only; it does not represent observations from the PYS to HDM comparison study).

Figure 2 displays an example relationship between reducing contribution of houses to a mix and increasing percentage reduction to HDM calculated yield. The data presented is for illustrative purposes only and does not reflect actual observations from the PYS to HDM comparison.

A criticism previously raised was that the authority did not update Long Term Average (LTA) mainstream yields within projections to reflect post-2011 census yield rates. The LTA is the overall yield that a development would be expected to attain once enough time has passed post-peak and reflects the wider housing stock yields, it is sometimes referred to as the “All Households” yield. The HDM inclusion of only 2011 census based All Household yields was suggested to not take account of inter-census period changes to overall dwelling stock numbers nor changes in the demographic profile of the authority area. A statistical randomised dwelling sample of 2,525 dwellings was undertaken (Figure 3) of which 22.6% were flats and 77.4% houses, this is reflective of the overall dwelling stock split of 22.4% flats and 77.6% houses.

Distribution of refined cohort within Hertfordshire

n = 2525



© Crown copyright and database rights 2020 OS EUL 100019608
© Local Government Information House Limited copyright and database rights 2020

Figure 3. The randomised LTA update dwelling sample and scatter throughout Hertfordshire.

Whilst the industry standard confidence level is 95% +/- 5% it was considered prudent to aim for 95% +/- 2%; based on this criteria Figure 4 indicates a sample size of 2,401 dwellings would be required.

The inclusion of dwellings above this threshold was to provide a buffer for exclusion of some poor-quality School Census addresses which are impossible to geolocate to Unique Property Reference Number (UPRN) level. It can be noted that in deriving the figure of 2,401 dwellings that the population proportion displaying the characteristic of interest threshold of 50% has been applied. The PYS has demonstrated that houses can have a primary pupil yield up to, and in excess of 50 per 100 dwellings, or 50%. The 50% demarcation in sampling is the “worst case” scenario due to the presence of a higher level of uncertainty and hence the sample size required at this mid-point is the largest.

Figure 1: Sample size lookup table

Population Proportion	Precision (at the 95 per cent confidence level)							
	±12%	±10%	±8%	±5%	±4%	±3%	±2%	±1%
50%	66	96	150	384	600	1,067	2,401	9,604
45% or 55%	66	95	148	380	594	1,056	2,376	9,507
40% or 60%	64	92	144	369	576	1,024	2,305	9,220
35% or 65%	60	87	136	349	546	971	2,184	8,739
30% or 70%	56	81	126	323	504	896	2,017	8,067
25% or 75%	50	72	112	288	450	800	1,800	7,203
20% or 80%	42	61	96	246	384	683	1,536	6,147
15% or 85%	34	48	76	195	306	544	1,224	4,898
10% or 90%	24	35	54	138	216	384	864	3,457
5% or 95%	12	18	28	72	114	202	456	1,824

If you are expecting non-response or a difficulty in locating your sample selections then it is prudent to over sample to ensure that the sample size achieved provides the required level of precision.

The figures in **bold and italics** denote sample sizes of less than the recommended minimum.

Figure 4. Required sample size based on the percentage representation of the characteristic of interest, level of precision and, confidence interval (Source: National Audit Office – Statistical & Technical Team – A practical Guide to Sampling).

Address cleansing of January 2019 School Census records (extracted based on a

postcode match to the sample dwelling cohort postcodes), and cross-referencing of subsequently allocated UPRN to that of the sample cohort determined a count of mainstream pupils for Units Only, Houses Only and, Flats Only. These updated values are shown in Table 1 below.

Table 1. Sample derived LTA mainstream sector yields per 100 dwellings at Units Only, House Only and, Flats Only (2019).

	Dwellings	N2	PRIMARY	SECONDARY	POST-16
UNITS ONLY	2525	36	472	303	71
	Yield per 100	1.4	18.7	12.0	2.8
HOUSES	1954	30	425	286	69
	Yield per 100	1.5	21.8	14.6	3.5
FLATS	571	6	47	17	2
	Yield per 100	1.1	8.2	3.0	0.4

Once bed size and tenure information for the sample cohort based on each individual dwelling UPRN is obtained the authority can calculate updated type, bed size and tenure specific LTA yields for inclusion in development modelling. In the interim, HCC is conducting a 2020 LTA administrative update based on a larger sample cohort size of 6,000 dwellings. It is intended that this will both further reduce the confidence interval <1.5%, within which the true population mean will lie, and permit initial examination of special school LTA yields by sector.

1.5 Conclusion

Hertfordshire County Council has statutory requirements for a number of service areas. In particular, when considering the outputs of the model, to provide sufficient school places for its populace. Part of this process is to have robust and transparent processes which reflect that due diligence has been undertaken in estimating the most likely pupil yield arising from a particular development. The authority is confident that the contributions requested from developers as a result of the projection model, aligned with actual observed yields from the county council's Pupil Yield Study, are accurate and fair and are also supported by additional pieces of work which the county council has previously undertaken. Projected yield, and other data, arising from the model will be used to inform discussion on residential planning applications as sites come forward for delivery.

TECHNICAL APPENDIX 1: OTHER METHODS FOR THE PROJECTION OF POPULATION ARISING FROM NEW BUILD DEVELOPMENTS.

Historically estimates of the population, in particular child yield for education contributions, resulting from new housing developments have been debatable between authorities and developers although good data to support these negotiations has often been limited. Many factors influence both whether a contribution is sought from a proposed development by a local authority and also the scale requested (whether financial, land or other). General factors that influence whether a contribution is sought include:

- Development size (total number of dwellings).
- Development location.
- School capacity in the area (for primary and secondary aged pupils).
- Early years (childcare and pre-school) capacity in the area.
- Development composition, published literature indicates that sometimes the following are excluded from providing an education contribution:
 - Bed Sits, Studio and one bedroom properties³
 - Sheltered accommodation.
 - Hostels.
 - Student accommodation.
 - Specialist elderly housing such as rest homes and nursing homes.
 - Redevelopment or housing development schemes which do not increase the number of family houses.

Factors that influence the scale of the contribution from a housing development generally include:

- Dwelling Type – House or Flat.
- Dwelling Size – Number of bedrooms.

³ For example; Bracknell Forest (Planning Obligations, Supplementary Planning Document February 2015); Cambridgeshire County Council (Revisions to child yield multipliers for new developments September 2015); Essex County Council (The Essex County Council Developers' Guide to Infrastructure Contributions 2015).

- Dwelling Tenure – Market or Social Housing (often cross referred to as Affordable).

A number of methods have been applied by local authorities to determine pupil yields arising from new developments, these include:

- Demographic methods.
- Surveys of new build housing.
- Census data typically relating to person age and household counts for “All Households” and “Migrant Households” for application in statistical modelling.

Hertfordshire County Council has previously undertaken a review of local authority processes in determining pupil yields from new developments which examines in greater depth each of these methods (June 2012).

1.1 DEMOGRAPHIC RATIOS

Generally the application of demographic ratios is the simplest method to determine population yield from a development. However it should be noted that within published literature generally no distinction is made between older housing stock and new build properties, for dwelling type, size or tenure. This method therefore discounts the fact that wholly moving (Migrant Households) have a difference demographic age structure than the population as a whole and at best is suggestive of what a long term average yield would be in comparison to a local authority as a whole. Additionally this method has only tended to be applied by local authorities where a proposed development does not specify the type or tenure of housing that will be built. Whilst focus herein is predominantly on child yield the method is applicable to all age groups.

The Department for Communities and Local Government estimated that as at the 31st March 2016 there were 483,260 domestic dwellings in Hertfordshire (Source: DCLG Housing Statistics Table 125 - Local Authority Level). The Office for National Statistics (ONS) Mid-Year Estimates 2015 indicated that there were 264,254 children aged 0 to <18 years giving rise to an overall yield of 55 children per 100 dwellings

(Table 1). Applying the aggregated number of children within each year of age determined that in Hertfordshire, per 100 dwellings, there would be a yield of 13 children to Early Years (0 to <4 years), 22 to primary (4 to <11 years), 14 to secondary (11 to <16 years) and 6 to Post-16 education (note the latter excludes any applicable Post-16 stay on rate). In relation to the total population there would be a yield of 241 persons per 100 dwellings of which 67 would be aged 55+ and 40 aged 65+.

Table 1. Example yields per 100 dwellings for commonly requested population sectors based on the most recent DCLG dwelling estimates and ONS Mid-Year Estimates data (2015/16). For comparative purposes a selection of data for 2012 is also displayed.

	<i>0 - 3 Years</i>	<i>4 - 10 Years</i>	<i>4 - 8 Years</i>	<i>11 - 15 Years</i>	<i>16 - 17 Years</i>
2015 MYE	60,895	107,129	78,817	68,053	28,177
2016 Dwellings	483,260				
Yield per 100	12.6	22.2	16.3	14.1	5.8
	<i>13 - 19 Years</i>	<i>0 - 17 Years</i>	<i>Age 55+</i>	<i>Age 65+</i>	<i>Total Pop.</i>
2015 MYE	94,070	264,254	322,141	194,328	1,166,339
Yield per 100	19.5	54.7	66.7	40.2	241.3
	<i>0 - 3 Years</i>	<i>4 - 10 Years</i>	<i>11 - 15 Years</i>	<i>16 - 17 Years</i>	<i>0 - 17 Years</i>
2012 MYE	61,266	97,040	68,959	28,684	255,949
2012 Dwellings*	470,428				
Yield per 100	13.0	20.6	14.7	6.1	54.4

*Determined from Address Point files.

Since 2012 there has been an increase in the overall yield of children per 100 dwellings resulting from an additional 8,305 children aged 0 to 18 years (Table 1). The rise in overall number of children has been driven by an increase of 10,089 primary aged children offset by a slight decrease in the Early Years, Secondary and

Post-16 cohorts of 371, 906 and 507 children respectively. Overtime the primary cohort will age and transition into the secondary sector resulting in an approximate 14% rise ($[10,089/68,959]*100$) in this cohort. Sector yields per 100 dwellings calculated using this method would be applied to a known development size to determine a proxy measure of numbers of children irrespective of the dwelling bed size, type or tenure. For example the calculated 22 primary age children per 100 dwellings arising from Table 1 equates to 1 Form of Entry (FE, 210 primary age pupils) arising from 950 dwellings. Tables 2 and 3 display the yield per 100 dwelling values by age group for 2011 Census derived All Households and Migrant Household data sets. It can be observed that the yield values within the Early Years (0 to 3 years) sector are significantly higher in Migrant Households than All Households whilst the primary yields are relatively comparable.

Table 2. Example yields per 100 dwellings for commonly requested population sectors based on the 2011 Census All Households customised table outputs for Hertfordshire.

	<i>0 - 3 Years</i>	<i>4 - 10 Years</i>	<i>4 - 8 Years</i>	<i>11 - 15 Years</i>	<i>16 - 17 Years</i>
Population	59,396	93,828	67,569	68,918	28,463
Households	451,608				
Yield per 100	13.2	20.8	15.0	15.3	6.3

	<i>13 - 19 Years</i>	<i>0 - 17 Years</i>	<i>Age 55+</i>	<i>Age 65+</i>	<i>Total Pop.</i>
Population	93,884	250,605	290,132	166,589	1,097,683
Yield per 100	20.8	55.5	64.2	36.9	243.1

New build developments will be populated by persons that move into a development and indications of their numbers can be sourced from ONS defined wholly moving households. The Office for National Statistics (ONS) states that: “*Migration tends to be concentrated at young adult ages... future net migration has a much greater effect on the projected number of women of childbearing age and hence the projected number of births, than on projected deaths* (ONS SNPP 2014 – 29th)

October 2015)”. The demographic profile of migrant households therefore tends to differ observably from the population as a whole and given the dominance of the young fertile adult groups the likely number of births will be higher. It is a matter of natural progression that these high birth numbers will transition over time into the Early Years, Primary and Secondary sectors.

Table 3. Example yields per 100 dwellings for commonly requested population sectors based on the 2011 Census Migrant Households customised table outputs for Hertfordshire.

	<i>0 - 3 Years</i>	<i>4 - 10 Years</i>	<i>4 - 8 Years</i>	<i>11 - 15 Years</i>	<i>16 - 17 Years</i>
Population	8,503	7,046	5,400	3,222	1,030
Households	32,846				
Yield per 100	25.9	21.5	16.4	9.8	3.1
	<i>13 - 19 Years</i>	<i>0 - 17 Years</i>	<i>Age 55+</i>	<i>Age 65+</i>	<i>Total Pop.</i>
Population	3,981	19,801	6,951	3,453	71,334
Yield per 100	12.1	60.3	21.2	10.5	217.2

A significant limitation of the demographic ratios method is the inability to age the high yield per 100 dwellings in the Early Years sector into the primary cohort as a development ages resulting in an under-estimation of the number of children likely to require a school place in the future. The “Units Only” model projects a primary pupil yield of 426 pupils for 1,000 dwellings on the basis of the Migrant Household bed size mix however the summary primary yield per 100 dwellings within the underlying data set was 21.5 pupils (Table 3).

This is not dissimilar to those values displayed in Table 1 and equates to a projected primary yield difference of 211 (426 – 215) pupils and occurs as the application of flat rates does not allow for the cumulative transition of the higher yield per 100 dwellings age 0 to 3 cohorts into the primary sector over time. **It is therefore not necessarily the immediate number of primary age children arising from a**

development but the transition of higher yield births into this sector which increases demand on school places.

Any yield calculation method which does not consider this factor is likely to under-project future school place demand. Account is also not given to the higher “birth rates” within a new development as it ages and transitions to a rate equivalent to All Households of an identical dwelling mix (Figure 1). The effect of discounting the transition of the younger cohorts into the primary sector is in this example a significant under representation of likely yield. It is of note that the transition from a peak yield following a development completion to that expected from Hertfordshire overall can take many years and as such consideration cannot be given to the long term average in isolation.

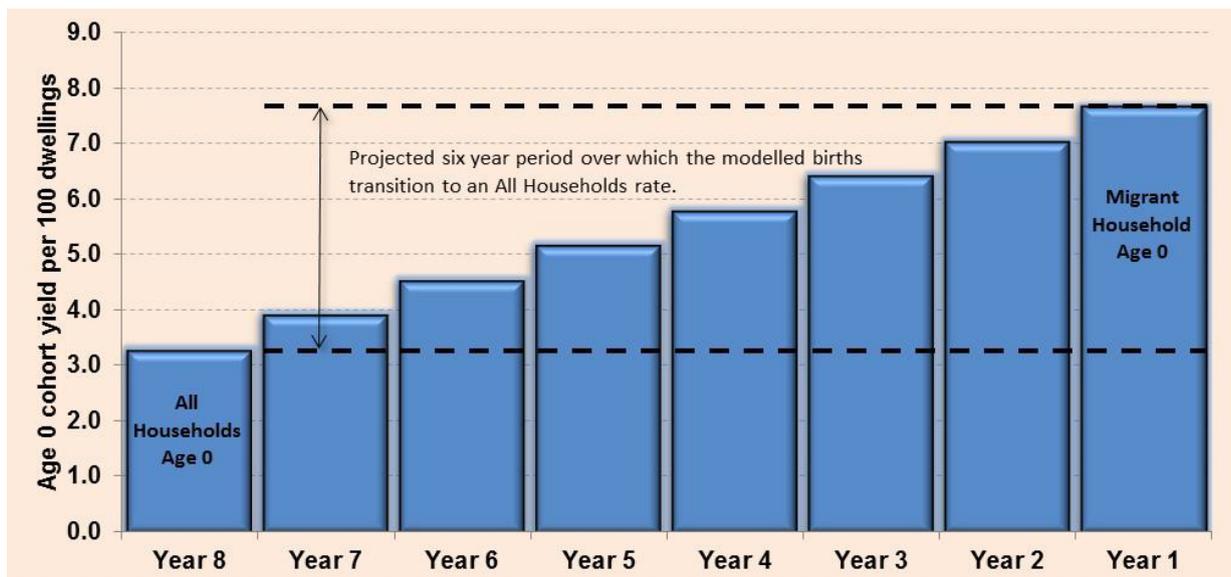


Figure 1. The transition of the Age 0 yield per 100 dwellings from Migrant Households (Year 1) for per annum completed dwellings in a development to that of the All Households yield (Year 8). The data displayed is representative of the Units Only development of 1,000 dwellings with 2011 census bed size mix.

Overall the impact of migration on population change can be significant with the ONS National Population Projections (2014) indicating that nationally 51% of population change to the end of their projection horizon will occur as a result of this element. This rises to 68% if taking into account the indirect contribution of future migration to

population change through its effect on births and deaths. **The demographic characteristics of migrant populations are generally sufficiently different to that of the population as a whole that they are considered by the ONS as a separate group**, much the same way that Special Populations are in the creation of their mid-year estimates.

1.2 HOUSING SURVEYS

Yields determined from surveys and that of a census tend to be more specific than demographic ratios and take into account factors such as accommodation type (house or flat), size (number of bedrooms) and tenure (affordable and market housing) which are generally accepted to influence overall child yield from a development⁴. These methods also allow for the hypothesis that new builds can give rise to a higher pupil yield in comparison to all housing stock and are therefore considered more precise. Surveys tend to be specific to particular areas where new developments have occurred and their robustness is directly proportional to the sampling methodology and response rates however they are generally resource intensive and costly.

HCC initiated a programme of research between 2008 and 2011 over concerns as to potential primary yield increasing as a result of the 22% rise in live births, and the 18% rise in the general fertility rate, between 2002 and 2011 within the authority. The project was an extension of an original body of work, funded by the Royal Statistical Society, which examined the accuracy of several beliefs relating to temporal variation in the age profile of residents on new developments in Hertfordshire. Primary and Secondary pupil yield data was sourced from the Schools Census following geo-coding and matching to identified and completed housing development sites of an urban, semi-urban and rural setting type. The authority's demographer determined that the sample size was statistically robust at county level.

⁴ *Social* housing is provided by a landlord on the basis of housing need, and rents are no higher than target rents set by the government for housing association and local authority rents. Market housing relates to owner-occupied and private rented housing, which does not meet the affordability and access criteria for social housing or intermediate housing.

Whilst neither dwelling type, tenure or bed size data was collected during the survey a mean yield of 23.2 primary pupils per 100 dwellings was determined although statistically applying a yield of 42.8 children per 100 dwellings would result in an under-prediction of calculated primary age yield in only 2.5% of observations. The mean yield of 23.2 pupils per 100 dwellings and the adjusted yield of 42.8 equated to one Form of Entry arising from between 900 and 500 dwellings respectively. Applying a one Form of Entry arising from this number of dwellings at a strategic level minimises the risk to the authority of under predicting pupil yield arising from new developments. The 1FE per 500 dwellings is also supported by analysis of 2011 census data as determined from the Development Model.

1.3 APPLICATION OF CENSUS DATA

Every ten years the census gives a complete picture of the nation and allows the comparison of different groups of people across the United Kingdom because the same questions are asked, and the information is recorded, in the same way throughout England, Wales, Scotland and Northern Ireland (Office for National Statistics). Public services such as schools, health, roads and libraries amongst others need to be planned and a census provides information that government needs to develop such policies and allocate funding. As a result of each census a multitude of data tables are produced, across a broad range of subjects, allowing for the statistically robust analysis and insight of the nation's characteristics across multiple geographies.

Information on population demographics and housing is collected as part of the census which provides data on accommodation and about the way households live. Application of census data within this context is generally dependent on the age profile yield from ONS customised table outputs relating to "All Households" and "Migrant Households". **All Households represents the overall population within a defined geography whilst Migrant Households represents wholly moving households in the twelve months prior to the census and which tend to have observably different demographic characteristics.** ONS customised 2011 census table outputs underpin the Hertfordshire Development model and are discussed extensively within Technical Appendix 2.

TECHNICAL APPENDIX 2: APPLICATION OF THE 2011 CENSUS ALL HOUSEHOLDS AND MIGRANT HOUSEHOLDS DATA TABLES.

The 2011 Census customised data outputs for All Households and Migrant Households provides information relating to the number of persons by age versus total number of households, or it can be broken down by dwelling bed size, type and tenure (or any combination thereof) for incorporation into the model. The 2001 census data was dependent on a relationship established between dwelling Number of Rooms to dwelling Number of Bedrooms in order to determine bed size. This was necessary as the 2001 census asked only for the household number of rooms and not the number of bedrooms, this distinction was corrected for the 2011 census which directly provides number of bedrooms. Whilst the 2011 census number of bedrooms data is directly applicable within the models as a result of statistical disclosure controls the bed size range was capped at 4+ bedrooms.

The customised outputs contained a series of sub-tables relating to (A) All Households (houses and flats combined i.e. B + C), (B) House or Bungalow and, (C) Flat, Maisonette or Apartment. An example of the All Households (ONS Table CTO174 & CTO173) sub-table is shown in Table 1 for all bed sizes in aggregate at Hertfordshire County Council geography. This is an age specific aggregation of the number of persons occurring in All Households (B and C combined) by tenure for Hertfordshire. Aggregation of the single year of ages for children aged 0 – 17 years allows for sector totals to be derived for pre-school (0 to <4 years), primary (4 to <11 years), secondary (11 to <16 years) and post-16 (16 + 17 years).

It is important to note that whilst the data displayed in Table 1 is theoretically an aggregation of Houses and Flats by Tenure, this being the constituent parts, the aggregate in this instance is for a “dwelling” of non-stated type. This distinction is of significance as at this level no distinction is made as to the proportional representation of the Type factor which Technical Note 1 determined to have an impact on projected development yield. It follows from the above classification that further sub-tables are available following an identical structure of persons by age for household type (Categories A, B and C above) by tenure and bed size.

Table 1. Summary data for All Households arising from ONS Table CTO174 & CTO173 - Accommodation type for households and age of persons by number of bedrooms by tenure – All households and all persons in households in Hertfordshire (Data shown is for all bed sizes in aggregate and for the age range 0 to 16 years only due to table size).

	Owner occupied: Owns outright	Owner occupied: Owns with a mortgage or loan and shared ownership	Rented from: Council (local authority)	Rented from: Housing Association/Registered Social Landlord	Rented from: Private landlord or letting agency	Rented from: Other	Total
TOTAL HOUSEHOLDS	134949	170855	41567	40695	54306	9236	451608

Total Persons by Age	269786	495415	96300	90178	127145	18859	1097683
0 years	686	8020	1510	1448	3080	303	15047
1 year	756	8018	1557	1486	2777	284	14878
2 years	758	8067	1641	1525	2542	245	14778
3 years	832	8279	1652	1518	2186	226	14693
4 years	892	8256	1581	1500	1941	238	14408
5 years	881	8045	1493	1533	1703	192	13847
6 years	980	7796	1408	1361	1571	190	13306
7 years	1089	7988	1365	1361	1478	175	13456
8 years	1109	7463	1290	1295	1229	166	12552
9 years	1174	7707	1421	1357	1235	146	13040
10 years	1362	7738	1396	1349	1218	156	13219
11 years	1409	7903	1385	1370	1241	162	13470
12 years	1498	8148	1473	1342	1161	145	13767
13 years	1638	7973	1487	1389	1088	143	13718
14 years	1686	8067	1529	1429	1097	162	13970
15 years	1837	7964	1583	1422	1050	137	13993
16 years	1972	8113	1571	1349	1053	156	14214

Table 2. The number of “All Households” residents and dwellings by bed size and the respective percentage (%) dwelling representation by bed size relative to all dwellings.

		Bed Size			
		1	2	3	4+
Units Only					
Persons	1,097,683	74,947	220,330	473,749	328,657
Dwellings	451,608	55,571	111,715	181,086	103,236
<i>% dwelling mix by size</i>		12.3%	24.7%	40.1%	22.9%
Units & Type - Houses					
Persons	930,773	14,258	130,285	460,547	325,683
Dwellings	353,351	9,778	65,318	175,921	102,334
<i>% dwelling mix by size</i>		2.2%	14.5%	39.0%	22.7%
Units & Type - Flats					
Persons	166,910	60,689	90,045	13,202	2,974
Dwellings	98,257	45,793	46,397	5,165	902
<i>% dwelling mix by size</i>		10.1%	10.3%	1.1%	0.2%
Units & Type & Tenure – Open Market Houses					
Persons	799,477	8,924	99,604	378,021	312,928
Dwellings	304,930	5,697	51,793	148,273	99,167
<i>% dwelling mix by size</i>		1.3%	11.5%	32.8%	22.0%
Units and Type & Tenure – Social Houses					
Persons	131,296	5,334	30,681	82,526	12,755
Dwellings	48,421	4,081	13,525	27,648	3,167
<i>% dwelling mix by size</i>		0.9%	3.0%	6.1%	0.7%
Units and Type & Tenure – Open Market Flats					
Persons	111,728	35,135	64,543	9,499	2,551
Dwellings	64,416	24,995	34,788	3,870	763
<i>% dwelling mix by size</i>		5.5%	7.7%	0.9%	0.2%
Units and Type & Tenure – Social Flats					
Persons	55,182	25,554	25,502	3,703	423
Dwellings	33,841	20,798	11,609	1,295	139
<i>% dwelling mix by size</i>		4.6%	2.6%	0.3%	0.0%

Table 3. The number of “Migrant Households” residents and dwellings by bed size and the respective percentage (%) dwelling representation by bed size relative to all dwellings.

		Bed Size			
Units Only		1	2	3	4+
Persons	71,334	10,753	21,918	24,111	14,552
Dwellings	32,846	8,254	11,497	8,714	4,381
<i>% dwelling mix by size</i>		25.1%	35.0%	26.5%	13.3%
<hr/>					
Units & Type - Houses		1	2	3	4+
Persons	48,036	1,423	9,610	22,707	14,296
Dwellings	18,252	1,030	4,813	8,130	4,279
<i>% dwelling mix by size</i>		3.1%	14.7%	24.8%	13.0%
<hr/>					
Units & Type - Flats		1	2	3	4+
Persons	23,298	9,330	12,308	1,404	256
Dwellings	14,594	7,224	6,684	584	102
<i>% dwelling mix by size</i>		22.0%	20.3%	1.8%	0.3%
<hr/>					
Units and Type & Tenure – Open Market Houses					
		1	2	3	4+
Persons	41,267	1,050	7,850	18,784	13,583
Dwellings	16,004	723	4,061	7,087	4,133
<i>% dwelling mix by size</i>		2.2%	12.4%	21.6%	12.6%
<hr/>					
Units and Type & Tenure – Social Houses					
		1	2	3	4+
Persons	6,769	373	1,760	3,923	713
Dwellings	2,248	307	752	1,043	146
<i>% dwelling mix by size</i>		0.9%	2.3%	3.2%	0.4%
<hr/>					
Units and Type & Tenure – Open Market Flats					
		1	2	3	4+
Persons	17,638	6,546	9,816	1,076	200
Dwellings	10,993	4,918	5,518	474	83
<i>% dwelling mix by size</i>		15.0%	16.8%	1.4%	0.3%
<hr/>					
Units and Type & Tenure – Social Flats					
		1	2	3	4+
Persons	5,660	2,784	2,492	328	56
Dwellings	3,601	2,306	1,166	110	19
<i>% dwelling mix by size</i>		7.0%	3.5%	0.3%	0.1%

These tables, of which there are 330 in total (165 each for All Households and Migrant Households), provide the underlying raw data used in calculating child yield by sector, and by varying level of detail, within the model applied by Hertfordshire County Council. Combination of customised table outputs CTO173 and CTO174 for All Households determined that there were 451,608 households in total within Hertfordshire of which 12.3% were 1 bedroom dwellings, 24.7% were 2 bedroom, 40.1% were 3 bedroom and 22.9% were 4 and above bedroom dwellings (Table 2).

In relation to the Migrant, wholly moving households in the year prior to the 2011 census date, customised output for Hertfordshire it was observed that there were a total of 32,846 households. Of these 25.1% were 1 bedroom households, 35.0% were 2 bedrooms, 26.5% were 3 bedrooms and 13.3% were 4 or more bedrooms (Table 3). In comparison the proportion of 1 and 2 bedroom households within the Migrants cohort was observably higher than that of the All Households.

Conversely the proportion of 3 and 4 (or more) bedroom households in Hertfordshire within the All Households customised output was higher than that of the Migrants cohort. In both instances the census household mix, as defined within Table 2 and 3, determined a particular age yield profile based on the proportional representation of these bedroom sizes. An amendment to the proportional mix would likely result in a different age yield being determined which would be an important component of any model. With respect to the percentage representation by dwelling type All Households had 78.4% Houses and 21.7% Flats whilst Migrant Households had a lower proportion of Houses at 55.6% and 44.4% Flats.

The dominant tenure for All Households and Migrant Households was Open Market Houses at 67.6% and 48.8% respectively followed by Open Market Flats at 14.3% and 33.5%. Affordable flats had a higher proportional representation in Migrant Households at 10.9% than that observed for All Households at 7.5%. Broadly speaking occupancy rates by type and tenure were similar between All Households and Migrant Households and in both instances affordable dwellings generally had a higher value (Tables 4 and 5). The latter point suggests that affordable dwellings are generally used more efficiently than that of the equivalent Open Market residences.

Table 4. The “All Households” percentage (%) contribution of households by Type and Tenure to total households for the Hertfordshire model and respective total population occupancy rates by bed size.

	% Contribution	Σ	Occupancy Ratio by bed size			
			1	2	3	4+
Units Only	100.0%	2.4	1.3	2.0	2.6	3.2
Units and Type						
<i>Houses</i>	78.4%	2.6	1.5	2.0	2.6	3.2
<i>Flats</i>	21.7%	1.7	1.3	1.9	2.6	3.3
Units and Type & Tenure						
<i>OM Houses</i>	67.6%	2.6	1.6	1.9	2.5	3.2
<i>Aff. Houses</i>	10.7%	2.7	1.3	2.3	3.0	4.0
<i>OM Flats</i>	14.3%	1.7	1.4	1.9	2.5	3.3
<i>Aff. Flats</i>	7.5%	1.6	1.2	2.2	2.9	3.0

Dividing the number of persons by the number of households by size (number of bedrooms) determines a “per dwelling” person yield by single year of age for both All Households and Migrant households (Table 6). For example within Migrant Households there were a total of 2,518 persons aged 0 for all bedroom sizes and a total number of 32,846 households which gives a specific age yield per dwelling of 0.08 in this instance. The 3 bedroom dwelling size count of persons aged 0 was 925 whilst the number of households was 8,714 giving rise to a single dwelling yield aged 0 of 0.106 and so forth. As Table 6 displays the data can be further broken down to provide single dwelling yields by age and bed size for Type and Type & Tenure. Aggregation of the Single Year of Age (SYOA) data presented within Table 6 allows for school stage totals to be determined per single dwelling for All Dwellings and by dwelling size for Type and Type & Tenure combined.

Table 5. The “Migrant Households” percentage (%) contribution of households by Type and Tenure to total households for the model and respective total population occupancy rates by bed size.

	% Contribution	Σ	Occupancy Ratio by bed size			
			1	2	3	4+
Units Only	100.0%	2.2	1.3	1.9	2.8	3.3
Units and Type						
<i>Houses</i>	55.6%	2.6	1.4	2.0	2.8	3.3
<i>Flats</i>	44.4%	1.6	1.3	1.8	2.4	2.5
Units and Type & Tenure						
<i>OM Houses</i>	48.8%	2.6	1.5	1.9	2.7	3.3
<i>Aff. Houses</i>	6.8%	3.0	1.2	2.3	3.8	4.9
<i>OM Flats</i>	33.5%	1.6	1.3	1.8	2.3	2.4
<i>Aff. Flats</i>	10.9%	1.6	1.2	2.1	3.0	2.9

The yield per dwelling values readily lend themselves for transformation to commonly applied ratios of child yield per 100 dwellings through multiplying the single year of age yield by specific bedroom size to the relevant development composition by bed size. This is discussed in greater detail in Technical Appendix 3. Where a development mix is unknown, such that just the development overall size is known, then the 2011 Migrant Household bed size mix ratios are applied (Units Only). Where the development mix is known, i.e. number of dwellings by bedroom size for all types and/or tenures combined, the specific mix is applied in the calculation process (Units and Type/Units and Type & Tenure). This therefore allows for yields to be calculated specific to the development mix characteristics but also enables the determination of yields wherein the mix is unknown through application of the census ratios. The Census development mix ratios for All Households and Migrant Households are as shown in Tables 2 & 3.

Table 6. The yield per dwelling by Single Year of Age for 3 Bed dwellings for “Migrant Households”.

Age (Years)	<i>Units Only</i>	<i>Units and Type</i>		<i>Units and Type & Tenure</i>			
		<i>Houses</i>	<i>Flats</i>	<i>OM Houses</i>	<i>Social Houses</i>	<i>OM Flats</i>	<i>Social Flats</i>
0	0.106	0.109	0.072	0.101	0.157	0.053	0.155
1	0.104	0.107	0.070	0.096	0.178	0.057	0.127
2	0.093	0.094	0.074	0.080	0.194	0.049	0.182
3	0.085	0.087	0.060	0.072	0.191	0.044	0.127
4	0.072	0.071	0.077	0.060	0.149	0.068	0.118
5	0.063	0.065	0.034	0.054	0.138	0.027	0.064
6	0.053	0.055	0.036	0.044	0.128	0.030	0.064
7	0.050	0.051	0.038	0.040	0.126	0.023	0.100
8	0.046	0.047	0.029	0.037	0.111	0.021	0.064
9	0.045	0.046	0.038	0.038	0.098	0.034	0.055
10	0.043	0.044	0.026	0.038	0.087	0.025	0.027
11	0.042	0.043	0.027	0.036	0.092	0.019	0.064
12	0.039	0.038	0.039	0.032	0.081	0.038	0.045
13	0.031	0.031	0.026	0.026	0.067	0.025	0.027
14	0.033	0.033	0.034	0.027	0.075	0.025	0.073
15	0.025	0.025	0.017	0.021	0.058	0.013	0.036
16	0.028	0.028	0.026	0.025	0.052	0.021	0.045
17	0.025	0.026	0.021	0.021	0.058	0.017	0.036
18	0.022	0.020	0.046	0.017	0.047	0.025	0.136
19	0.017	0.016	0.033	0.013	0.034	0.025	0.064

The difference between All Household and Migrant Household yield per 100 dwellings can be investigated on the basis of an example development applied to “Units Only”. This applies 1000 dwellings of unknown Type or Type & Tenure, with a 7 year build trajectory and applying the 2011 census Migrant Household bed size mix (1 bed = 25.1% of development total, 2 bed = 35.0%, 3 bed = 26.5% and 4+ bed = 13.3%). Figure 1 displays the observably higher Migrant Household yield per 100

dwellings of the young adult cohorts predominantly from 25 through to 39 years which relates to those cohorts whom are of reproductive age.

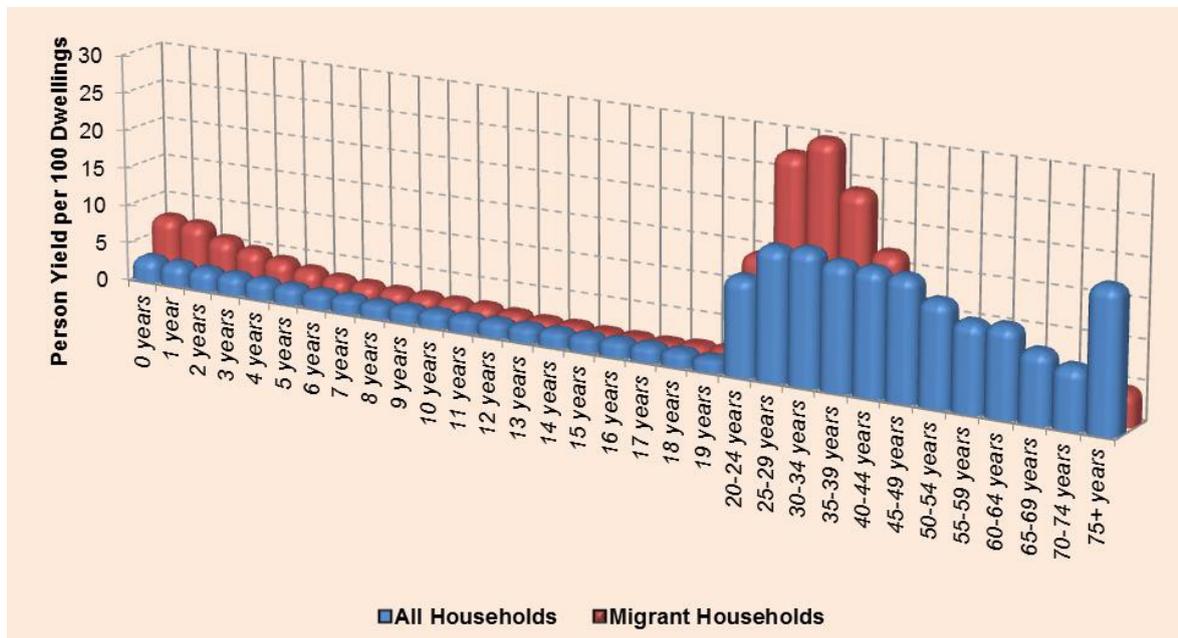


Figure 1. The yield per 100 dwellings for Migrant Households and All Households based on the 2011 census data tables for Hertfordshire in consideration of All Dwellings (Bed size mix reflects that of Migrant Households – Table 2).

It is also of note that the Migrant Household yields are twice those of All Households in the Age 0, 1, 2 and 3 cohorts. Whilst the primary age yields are higher for the Migrant Households this is predominantly in the age 4 to 6 cohorts with a tapering to an equivalent yield of All Households beyond this point. It is therefore observable that it is not necessarily a higher yield in primary age cohorts arising from Migrant Households which determines the yield arising from a new development but the ageing of the early years into the primary sector and beyond. The long term effects would be of particular relevance for a development with an extended trajectory.

Figure 2 displays the difference in yield per 100 dwellings by age between Migrant Households and All Households for the “Units Only” example given above wherein positive values indicate a higher Migrant Household yield. For the specified

development mix it can be observed that the Migrant age 7 to 11 yield is only marginally higher than that of All Households whilst, for the secondary sector, this position is reversed with All Households having a higher yield.

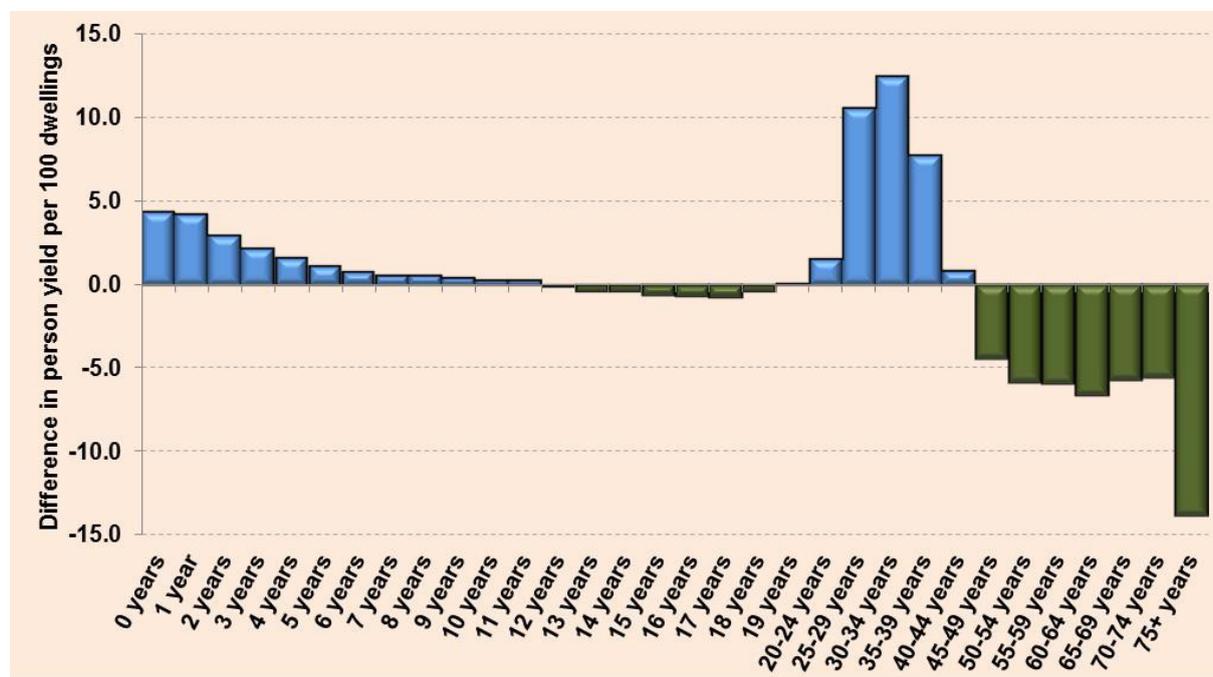


Figure 2. The difference in yield per 100 dwellings between Migrant Households and All Households based on the “Units Only” example (Bed size mix for both reflects that of the 2011 census Migrant Households – Table 2 – Positive values are a higher yield in Migrant Households).

Of particular note however is the observably higher yield per 100 dwellings within the adults aged 20 to 39 years which supports the ONS position that migrant households tend to be dominated by younger adults. This cohort is of reproductive age and applying age specific fertility rates to the number of females would determine a higher number of births than that experienced by the equivalent number of All Households. The higher number of births would be in addition to the greater Age 0 to 4 yields per 100 dwellings already present in Migrant Households which Figure 2 displays supporting the hypothesis that wholly moving households tend to have higher proportions of younger children.

Whilst the differences in these yields per 100 dwellings are observable context can be provided by dividing the Migrant Household yields by the All Households. On this

basis the age 0, 1, 2, 3, 4, 5 and 6 year old Migrant Households yields per 100 dwellings for the specified development mix are 234%, 238%, 203%, 180%, 162%, 147% and 134% higher than that of the All Households respectively. However, it is not just the migrant yields arising immediately from the completed dwellings which have an impact on projected early years and primary child numbers. As a development progresses and dwellings become occupied they will, over time, transition into a yield per 100 dwellings rate that reflects that of All Households i.e. a development over time is expected to reflect the demographic characteristics of Hertfordshire overall.

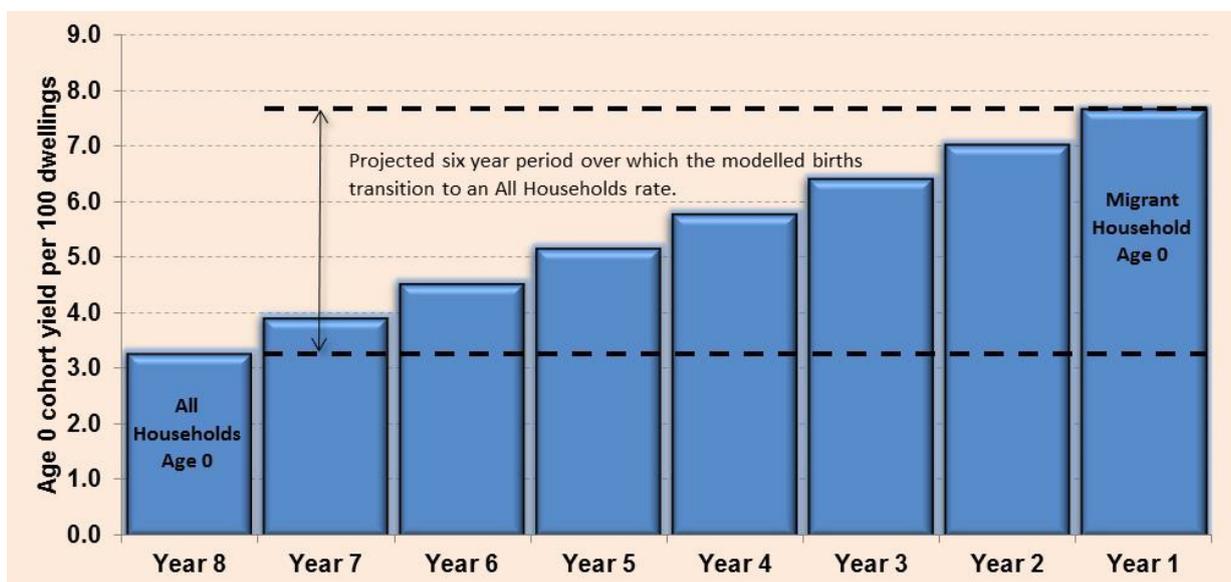


Figure 3. The transition of the Age 0 yield per 100 dwellings from Migrant Households (Year 1) for per annum completed dwellings in a development to that of the All Households yield (Year 8). The data displayed is representative of the “Units Only” example specific development mix.

As such the number of births that arise from a development, which age into early years and beyond, will reduce to that expected of All Households although this is a transitional period over a number of years within which the births arising for dwellings completed will still exceed that of All Households. For the “Units Only” example the expected age 0 cohorts that will transition into completed dwellings over time is as shown in Figure 3, note that these values are specific to the applied development mix.

It can be observed from the specified development mix that not only is the Age 0 (or effective birth) yield per 100 dwellings twice that of All Households but over a number of years, whilst the development transitions to a yield rate of Hertfordshire overall, that the number of modelled births will be higher. This position is supported by the observably higher per 100 dwelling yields occurring within the reproductive age cohorts (Figure 2). A final observation is with regards to the older adult cohorts aged 45 and above. Figure 2 clearly presents that the yield per 100 dwellings of this cohort is considerably greater in All Households than that of Migrant Households. The dominance of the younger adults aged 20 – 39 years and the relatively lower number of older persons aged 45+ provides Migrant Households a demographic profile which is sufficiently different to the population as a whole that they are often considered as a separate group within projection models.

TECHNICAL APPENDIX 3: HOW THE DEVELOPMENT MODEL OPERATES.

1.0 SINGLE DWELLING YIELDS AND APPLYING THE DEVELOPMENT BED SIZE PERCENTAGE SPLIT

The 2011 census All Households and Migrant Households customised data tables allows for the determination of number of persons and number of households by bed size. This is applicable at all levels of detail for the “Units Only”, “Units and Type” and, the “Units and Type & Tenure” drill downs available in the model. It can be observed that the aggregate number of persons and households at the highest level of detail (Units and Type & Tenure) equals that at the lowest level of detail (Units Only).

Within this context the Units Only level of detail considers all households to be an aggregate count of unspecified dwelling type whilst for Units and Type & Tenure the specific number of houses and flats by tenure is known. Given that the number of dwellings by bed size is known and that the number of persons by bed size is also known then it is possible to calculate yield per dwelling ratio values by bed size for each level of detail. This is applied within the Development model as a number of hidden and protected calculation worksheets relating to All Households and Migrant Households.

The layout and processes of each of the worksheets is identical between All Households and Migrant Households. Each of the worksheets contains a table linked to the Illustrative Mix and represents the number of dwellings by bed size, Type and where applicable Tenure (Figure 1). Where type and tenure is not being considered then the Units Only level of detail will use the Development Size data and apply the census Migrant Household Bed Size Mix in the calculation processes.

Figure 2 displays the next table included within these worksheets which shows the 2011 census number of residents and households relevant to the level of detail specified (i.e. “Units Only”, “Units and Type” and, the “Units and Type & Tenure”).

Within this is displayed the bed size percentage mix used to multiply the single dwelling yield by age and bed size values derived from the census data into a yield per 100 dwelling rates by age. Each of the tables display the “Census Proportion” which represents the underlying census data bed size split and this is applied wherein a development mix by bed size is not specified (Units Only).

Development Mix by Tenure and Size																																															
<table border="1"> <thead> <tr> <th colspan="3">HOUSES</th> </tr> <tr> <th>Number of bedrooms</th> <th>A) Open Market</th> <th>B) Affordable (Social Rent)</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>0</td> <td>0</td> </tr> <tr> <td>2</td> <td>0</td> <td>0</td> </tr> <tr> <td>3</td> <td>0</td> <td>0</td> </tr> <tr> <td>4+</td> <td>0</td> <td>0</td> </tr> <tr> <td>Total</td> <td>0</td> <td>0</td> </tr> </tbody> </table>			HOUSES			Number of bedrooms	A) Open Market	B) Affordable (Social Rent)	1	0	0	2	0	0	3	0	0	4+	0	0	Total	0	0	<table border="1"> <thead> <tr> <th colspan="3">FLATS</th> </tr> <tr> <th>Number of bedrooms</th> <th>A) Open Market</th> <th>B) Affordable (Social Rent)</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>406</td> <td>271</td> </tr> <tr> <td>2</td> <td>740</td> <td>494</td> </tr> <tr> <td>3</td> <td>47</td> <td>32</td> </tr> <tr> <td>4+</td> <td>0</td> <td>0</td> </tr> <tr> <td>Total</td> <td>1193</td> <td>797</td> </tr> </tbody> </table>			FLATS			Number of bedrooms	A) Open Market	B) Affordable (Social Rent)	1	406	271	2	740	494	3	47	32	4+	0	0	Total	1193	797
HOUSES																																															
Number of bedrooms	A) Open Market	B) Affordable (Social Rent)																																													
1	0	0																																													
2	0	0																																													
3	0	0																																													
4+	0	0																																													
Total	0	0																																													
FLATS																																															
Number of bedrooms	A) Open Market	B) Affordable (Social Rent)																																													
1	406	271																																													
2	740	494																																													
3	47	32																																													
4+	0	0																																													
Total	1193	797																																													
<p><i>Totals entered here must equal the Development Size entered below</i></p>			<table border="1"> <tbody> <tr> <td>Total Affordable (Social)</td> <td colspan="2">797</td> </tr> <tr> <td>Total Open Market</td> <td colspan="2">1193</td> </tr> <tr> <td>Overall total</td> <td colspan="2">1990</td> </tr> </tbody> </table>			Total Affordable (Social)	797		Total Open Market	1193		Overall total	1990																																		
Total Affordable (Social)	797																																														
Total Open Market	1193																																														
Overall total	1990																																														
<table border="1"> <thead> <tr> <th colspan="2">Dwelling Proportions</th> </tr> <tr> <th>Number of</th> <th>% based on</th> </tr> </thead> <tbody> <tr> <td>1 bed</td> <td>34.0</td> </tr> <tr> <td>2 bed</td> <td>62.0</td> </tr> <tr> <td>3 bed</td> <td>4.0</td> </tr> <tr> <td>4+ bed</td> <td>0.0</td> </tr> <tr> <td>Total</td> <td>100.0</td> </tr> </tbody> </table>			Dwelling Proportions		Number of	% based on	1 bed	34.0	2 bed	62.0	3 bed	4.0	4+ bed	0.0	Total	100.0	<table border="1"> <tbody> <tr> <td>Development Size</td> <td>1990</td> </tr> </tbody> </table>			Development Size	1990																										
Dwelling Proportions																																															
Number of	% based on																																														
1 bed	34.0																																														
2 bed	62.0																																														
3 bed	4.0																																														
4+ bed	0.0																																														
Total	100.0																																														
Development Size	1990																																														
			<table border="1"> <thead> <tr> <th colspan="2">IMPORTANT NOTE</th> </tr> </thead> <tbody> <tr> <td colspan="2">Where a development mix is not entered then the Dwelling Proportions by bed size will default to the 2011 Census All Dwellings values</td> </tr> </tbody> </table>			IMPORTANT NOTE		Where a development mix is not entered then the Dwelling Proportions by bed size will default to the 2011 Census All Dwellings values																																							
IMPORTANT NOTE																																															
Where a development mix is not entered then the Dwelling Proportions by bed size will default to the 2011 Census All Dwellings values																																															

Figure 1. The development mix by tenure and size matrix contained within each of the yield by single dwelling worksheets.

The Development Proportion is displayed below the Census Proportion, where bed size data is entered into the models then the development mix will be applied rather than the census proportions. Detailed population data by age and bed size is presented from the relevant underlying census base data tables and is specific to the particular level of detail being applied (Figure 3).

AREA	Hertfordshire					
Known Development Total Size with Census Proportional Mix or Development Proportional Mix, by bedroom size, No Type or Tenure Split.						
ONS Customised Tables Census 2011 - CTO173 and CTO174						
2011 Census Geographic level = Hertfordshire and Districts						
All Tenures	BEDROOMS	1	2	3	4+	Check
Residents	1,097,683	74,947	220,330	473,749	328,657	OK
Households	451,608	55,571	111,715	181,086	103,236	OK
% household mix relative to all households		12.3%	24.7%	40.1%	22.9%	
TOTALS	Bedrooms	1	2	3	4+	
	Census Proportion	12.3	24.7	40.1	22.9	
	Development Proportion	34.0	62.0	4.0	0.0	

Figure 2. 2011 Census number of resident and households with the census or development proportions applied in the calculations displayed.

	All	1 Bed	2 Bed	3 Bed	4+ Bed		
Total Persons	1,097,683	74,947	220,330	473,749	328,657	OK	
	SYOA	Persons	Persons by number of bedrooms			Check	
A	0 years	15,047	986	4,963	6,189	2,909	OK
	1 year	14,878	684	4,499	6,488	3,207	OK
	2 years	14,778	447	4,003	6,599	3,729	OK
	3 years	14,693	364	3,501	6,746	4,082	OK
B	4 years	14,408	291	3,026	6,718	4,373	OK
	5 years	13,847	207	2,603	6,638	4,399	OK
	6 years	13,306	184	2,222	6,334	4,566	OK
	7 years	13,456	144	1,915	6,423	4,974	OK
	8 years	12,552	129	1,619	5,942	4,862	OK
	9 years	13,040	134	1,641	6,163	5,102	OK
C	10 years	13,219	119	1,597	6,103	5,400	OK
	11 years	13,470	125	1,420	6,187	5,738	OK
	12 years	13,767	119	1,357	6,419	5,872	OK
	13 years	13,718	96	1,294	6,390	5,938	OK
	14 years	13,970	97	1,278	6,560	6,035	OK
D	15 years	13,993	113	1,310	6,416	6,154	OK
	16 years	14,214	116	1,265	6,540	6,293	OK
	17 years	14,249	177	1,292	6,495	6,285	OK

Figure 3. The 2011 Census population data used within the model sheets to calculate single dwelling yield values by bed size and age.

The specific number of households by bed size data shown in Figure 2 is applied to the detailed bed size population by age data displayed in Figure 3 in order to determine single dwelling yield values by age and bed size (Figure 4). The single dwelling yields arise from the underlying census data relative to “Units Only”, “Units and Type” and, the “Units and Type & Tenure” and are not as yet adjusted to take account of the development bed size mix.

		All	1 Bed	2 Bed	3 Bed	4+ Bed
		SYOA	Child Yield per dwelling by SYOA			
		All				
A	0 years	0.03	0.018	0.044	0.034	0.028
	1 year	0.03	0.012	0.040	0.036	0.031
	2 years	0.03	0.008	0.036	0.036	0.036
	3 years	0.03	0.007	0.031	0.037	0.040
B	4 years	0.03	0.005	0.027	0.037	0.042
	5 years	0.03	0.004	0.023	0.037	0.043
	6 years	0.03	0.003	0.020	0.035	0.044
	7 years	0.03	0.003	0.017	0.035	0.048
	8 years	0.03	0.002	0.014	0.033	0.047
	9 years	0.03	0.002	0.015	0.034	0.049
	10 years	0.03	0.002	0.014	0.034	0.052
C	11 years	0.03	0.002	0.013	0.034	0.056
	12 years	0.03	0.002	0.012	0.035	0.057
	13 years	0.03	0.002	0.012	0.035	0.058
	14 years	0.03	0.002	0.011	0.036	0.058
	15 years	0.03	0.002	0.012	0.035	0.060
D	16 years	0.03	0.002	0.011	0.036	0.061
	17 years	0.03	0.003	0.012	0.036	0.061

Figure 4. Age and Bed size specific single dwelling yield values calculated within the relevant “Units Only”, “Units and Type” and, the “Units and Type & Tenure” underlying data sheets for All Households and Migrant Households.

1.1 CALCULATING THE YIELD PER 100 DWELLINGS BASED ON THE PERCENTAGE REPRESENTATION BY BED SIZE

The single dwelling yields are calculated by dividing the total number of persons of a particular age within a particular bed size household by the total number of households of that bed size. It therefore follows that if one were to multiply the single

dwelling yield, by age, for a particular bed size by the total number of households of that bed size then it would realise the census total number of people of that age and vice versa with households. An alternative way of expressing this is as a percentage value given that the total number of households is known and the breakdown by bed size is also known.

For example consider the “Migrant Households” census data for Units Only (i.e. no Type or Tenure level of detail). The total number of households was 32,846 of which 8254, 11497, 8714 and 4381 were 1, 2, 3 and 4+ bedroom dwellings respectively. It therefore follows that the percentage representation of these bed sizes was 25.1% for 1 bed, 35.0% for 2 bed, 26.5% for 3 bed and, 13.3% for 4+ bed. The migrant population by age and bed size as determined from the census, in the case of Units Only, was therefore resident in this bed size proportionate mix. This is intrinsically linked to the single dwelling yield values by age and bed size due to the inter-relationship of these parameters. If one were to multiply a particular age yield per dwelling value for a particular bed size by the proportional representation of that bed size household relative to all households then it would derive the total number of persons of that age in that bed size as at the census date.

Considering again the Units Only level of data, although this equally applies to Type and Tenure by bed size, the Age 0 yield per dwelling by bed size is as shown in Table 1 as (A). The percentage representation of the total number of households of each bed size relative to the total households is given as (B). Multiplying these figures together gives a yield per dwelling taking into account the percentage representation of the households relative to the total households (C). Multiplying these figures by one hundred gives an Age 0 yield per 100 dwellings (D) by bed size taking into account the proportionate bed size mix. The summation of these values by bed size gives an overall Age 0 yield per 100 dwellings which takes into account the percentage representation of the bed size mix. Based on the data in Table 1 the Migrant Household yield per 100 dwellings for Units Only (no Type nor Tenure distinction) for Age 0 children would therefore be $(0.669 + 2.746 + 2.813 + 1.430)$ 7.66 children.

Table 1. The application of the bed size percentage mix in order to calculate a yield per 100 dwellings specific to a development or the census. Data shown is for “Migrant Households” and the Units Only (no Type or Tenure distinction) Age 0 cohort.

	1 Bed	2 Bed	3 Bed	4+ Bed
<i>(A) Yield per Dwelling</i>	0.027	0.078	0.106	0.108
<i>(B) Household % Mix</i>	25.1%	35.0%	26.5%	13.3%
<i>(C) A x B</i>	0.007	0.027	0.028	0.014
<i>(D) Yield per 100 dwellings (C x 100)</i>	0.669	2.746	2.813	1.430

Within the model worksheets, as discussed later, the summary yields by age are multiplied by each year dwelling completions to determine the overall yield which will arise. The number of completions by bed size each year is unlikely to be known and therefore taking into account the bed size proportional representation in the yield calculations themselves accounts for this element. The yield per 100 dwellings by bed size taking into account the percentage bed size mix can be reverse calculated to check that the number of children matches that observed from the census. This can be done simply using the following equation:

$$\left(\text{Bed size yield per 100 dwellings} \times \left[\frac{\text{Total No: Households}}{100} \right] \right)$$

Applying this derives 220, 902, 924 and 470 Age 0 children resulting from the development proportional mix which matches that observed from the census (with the exception of minor rounding errors). An alternative way of expressing the yield per 100 dwellings with respect to the development proportionate bed size mix is displayed in Table 2 for the Age 0 cohort in the Units Only level of detail. The starting point in this instance is the number of households by bed size (A) from which the ratio value for a 100 households is determined (B). The total household 100 dwelling ratio value (328.46) is divided by the respective bed size ratio to determine a 1 household ratio (C) which is in effect the same as the household percentage mix.

The single dwelling yield for Age 0 children by bed size (*D*) multiplied by the 1 household ratio (*C*) determines the dwelling yield (*E*) by bed size. The per dwelling yield multiplied by 100 calculates the Age 0 yield per 100 dwellings which matches that calculated within Table 1 (minor differences due to rounding in applied data).

Table 2. The application of the 100 household ratio in order to calculate a yield specific to a development, or census, bed size mix. Data shown is for “Migrant Households” and the “Units Only” Age 0 cohort.

	<i>1 Bed</i>	<i>2 Bed</i>	<i>3 Bed</i>	<i>4+ Bed</i>	<i>Total</i>
<i>(A) All Dwellings</i>	8254	11497	8714	4381	32846
<i>(B) 100 household ratio (A/100)</i>	82.54	114.97	87.14	43.81	328.46
<i>(C) 1 household ratio</i>	0.251	0.350	0.265	0.133	N/A
<i>(D) Single dwelling yield</i>	0.027	0.078	0.106	0.108	N/A
<i>(E) per dwelling yield (C x D)</i>	0.007	0.027	0.028	0.014	0.08
<i>(F) per 100 dwelling yield (E x 100)</i>	0.670	2.746	2.816	1.434	7.67

It can therefore be observed that there is no difference in applying the percentage bed size mix as opposed to using the single dwelling yield multiplied by the representation of that bed size (by Type and Tenure where relevant) within the development and transforming to a per 100 dwellings figure. Both methods take into account the number of households by bed size relative to the total number of households. The proportionate bed size mix must always be taken into consideration as it enables the calculation of the bed size aggregate person yield per 100 dwellings required for the different levels of detail within the model. The percentage bed size mix values as observed from the census for “Migrant Households” for “Units Only”, “Units and Type” and, the “Units and Type & Tenure” are displayed in Technical Appendix 2 - Table 3.

The proportionate representation by bed size for the respective level of detail is applied to the single dwelling yields within the worksheets to determine the age and bed size yield per 100 dwellings (Figure 5). The area circled in Figure 5 represents the age and aggregate yield per 100 dwellings taking into account the development percentage bed size mix. These figures are linked through to the model worksheets for both All Households and Migrant Households for the relevant “Units Only”, “Units and Type” and, the “Units and Type & Tenure” modelling.

	SYOA	All	1 Bed	2 Bed	3 Bed	4+ Bed
			Yield per 100 dwellings based on development percentage by bed size			
A	0 years	3.5	0.60	2.75	0.14	0.00
	1 year	3.1	0.42	2.50	0.14	0.00
	2 years	2.6	0.27	2.22	0.14	0.00
	3 years	2.3	0.22	1.94	0.15	0.00
B	4 years	2.0	0.18	1.68	0.15	0.00
	5 years	1.7	0.13	1.44	0.15	0.00
	6 years	1.5	0.11	1.23	0.14	0.00
	7 years	1.3	0.09	1.06	0.14	0.00
	8 years	1.1	0.08	0.90	0.13	0.00
	9 years	1.1	0.08	0.91	0.14	0.00
C	10 years	1.1	0.07	0.89	0.13	0.00
	11 years	1.0	0.08	0.79	0.14	0.00
	12 years	1.0	0.07	0.75	0.14	0.00
	13 years	0.9	0.06	0.72	0.14	0.00
	14 years	0.9	0.06	0.71	0.14	0.00
D	15 years	0.9	0.07	0.73	0.14	0.00
	16 years	0.9	0.07	0.70	0.14	0.00
	17 years	1.0	0.11	0.72	0.14	0.00
	18 years	1.0	0.17	0.72	0.13	0.00
	19 years	1.1	0.28	0.76	0.10	0.00
	20-24 years	11.0	3.44	7.03	0.51	0.00

Figure 5. The single dwelling yields multiplied by the development bed size representation determines the age and bed size specific yield per 100 dwellings applied in the model sheets.

It is important to note that the method by which the percentage bed sizes are calculated differs between the levels of detail. For “Units Only” the development percentage bed size representation is determined by the number of dwellings by size divided by the total dwellings in the development. For “Units and Type” the percentage representation of houses is calculated as the number of houses of a

particular bed size divided by the total number of houses only. The percentage representation of flats is similarly determined by dividing the number of flats by bed size with the total number of flats only. A similar principle is applied within the “Units and Type & Tenure” wherein the percentage representation of Open Market Houses is determined by the number of Open Market Houses by particular bed size divided by the total number of Open Market Houses and so forth. This may appear contrary to expectations given that “Units Only” applies the total number of dwellings however a detailed explanation for this is given in Technical Appendix 2.

TECHNICAL APPENDIX 4: THE MODEL WORKSHEETS

The model worksheets represent the most complex part of the process in projecting population and contain the detailed calculation functions. Whilst the physical model is the intellectual property of HCC, the methodology that has been adopted to create these worksheets is explained in detail below. The model contains seven principle calculation sheets which incorporate elements from the relevant All Households, Migrant Households and Illustrative Mix sections, as discussed in Technical Appendix 3, to predict the likely population arising from a proposed development mix.

1.0 OVERVIEW OF THE MODEL WORKSHEETS

As can be observed from Figure 1 there are four principle matrices to each of the model sheets, these are:

- Population Age Distribution per 100 Dwellings (top right of Figure 1 – cells highlighted in brown)
- Unborn child yield per 100 dwellings (top left of Figure 1 – cells highlighted in yellow)
- Timescale for development completion (middle table of Figure 1)
- Population by age yielded from the proposed development (large table at the bottom of Figure 1)

In addition to each of these matrices there is a separate summary table which summarises the population counts by single year of age to service specified aggregate groups, this is discussed later in the Technical Appendix.

1.1 THE POPULATION AGE DISTRIBUTION AND UNBORN CHILD YIELD PER 100 DWELLINGS

The population age distribution by single year of age is automatically completed from the age specific bed size aggregate yield per 100 dwellings information arising from the development mix as determined with respect to Migrant Households (Technical

Appendix 3). This represents the anticipated population yield that is likely to arise per 100 dwellings from the development based on the proportionate bed size mix. Each of the model sheets links to the specific tables with respect to Units Only, Units and Type, Units and Type & Tenure.

SITE NAME:		Adapted from data from the Office for National Statistics licensed under the Open Government Licence v.1.0.																								
APPLICATION REF:																										
(A) Unborn child yield (per 100 dwellings)		AGE DISTRIBUTION - CHILDREN PER 100 DWELLINGS (SOU)																								
AGE	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
YIELD	3.41	3.58	3.76	3.94	4.12	4.29	4.47	4.65	3.36	2.46	1.62	1.56	1.14	0.99	0.75	0.82	0.73	0.68	0.69	0.75	0.43	0.56	0.54	0.53	0.55	1.03
(B) TIMESCALES FOR DEVELOPMENT (YEARS), COMPLETIONS PER ANNUM AND RUNNING TOTALS																										
Year	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	TOTAL		
Completions per annum	51	51	51	51	51	51	29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	335	
Running Total	51	102	153	204	255	306	335	335	335	335	335	335	335	335	335	335	335	335	335	335	335	335	335	335	335	
(C) Number of children by age yielded from proposed development																										
Dwellings	Year	Age 0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20-24	25-29	30-34	35-39	40-44
51	2016	2	2	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	1	1	9	18	13	8	5
51	2017	5	4	3	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	17	34	28	17	11
51	2018	7	6	5	4	3	2	2	1	1	1	1	1	1	1	1	1	1	1	1	2	24	49	43	28	17
51	2019	9	9	8	6	5	3	3	2	2	2	2	1	1	1	1	1	1	1	1	2	29	62	57	39	25
51	2020	11	11	10	8	7	5	4	3	3	2	2	2	2	2	2	2	1	1	2	2	34	73	72	51	33
51	2021	13	13	12	11	9	8	6	4	4	3	3	2	2	2	2	2	2	2	2	2	38	83	85	63	41
29	2022	14	14	13	12	11	10	8	6	5	4	3	3	3	2	2	2	2	2	2	2	38	85	93	72	49
0	2023	13	14	14	13	12	11	10	8	6	5	4	3	3	3	2	2	2	2	2	2	33	75	91	76	53
0	2024	13	13	14	14	13	12	11	10	8	6	5	4	3	3	3	2	2	2	2	2	28	67	88	79	58
0	2025	12	13	13	14	14	13	12	11	10	8	6	5	4	3	3	3	2	2	2	2	25	59	84	81	62
0	2026	12	12	13	13	14	14	13	12	11	10	8	6	5	4	3	3	3	2	2	2	22	52	79	81	66
0	2027	12	12	12	13	13	14	14	13	12	11	10	8	6	5	4	3	3	3	2	2	19	46	73	81	69
0	2028	11	12	12	12	13	13	14	14	13	12	11	10	8	6	5	4	3	3	3	2	18	41	68	79	71
0	2029	11	11	12	12	12	13	13	14	14	13	12	11	10	8	6	5	4	3	3	3	17	36	63	77	73
0	2030	11	11	11	12	12	12	13	13	14	14	13	12	11	10	8	6	5	4	3	3	16	32	57	74	74
0	2031	11	9	11	11	12	12	12	13	13	14	14	13	12	11	10	8	6	5	4	3	16	29	52	71	74
0	2032	11	9	9	11	11	12	12	12	13	13	14	14	13	12	11	10	8	6	5	4	16	26	48	67	73
0	2033	11	9	7	9	11	11	12	12	12	13	13	14	14	13	12	11	10	8	6	5	16	24	43	63	72
0	2034	11	9	7	7	9	11	11	12	12	12	13	13	14	14	13	12	11	10	8	6	18	23	39	59	70
0	2035	11	9	7	6	7	9	11	11	12	12	12	13	13	14	14	13	12	11	10	8	20	22	36	55	68
0	2036	11	9	7	6	6	7	9	11	11	12	12	12	13	13	14	14	13	12	11	10	24	21	33	51	66
0	2037	11	9	7	6	5	6	7	9	11	11	12	12	12	13	13	14	14	13	12	11	29	22	31	48	63
0	2038	11	9	7	6	5	5	6	7	9	11	11	12	12	12	13	13	14	14	13	12	34	23	29	44	60
0	2039	11	9	7	6	5	4	5	6	7	9	11	11	12	12	12	13	13	14	14	13	40	25	28	41	57
0	2040	11	9	7	6	5	4	4	5	6	7	9	11	11	12	12	12	13	13	14	14	45	28	27	39	54
0	2041	11	9	7	6	5	4	3	4	5	6	7	9	11	11	12	12	12	13	13	14	50	32	27	36	51
0	2042	11	9	7	6	5	4	3	3	4	5	6	7	9	11	11	12	12	12	13	13	54	35	28	35	48
0	2043	11	9	7	6	5	4	3	2	3	4	5	6	7	9	11	11	12	12	12	13	56	39	30	33	45
0	2044	11	9	7	6	5	4	3	2	2	3	4	5	6	7	9	11	11	12	12	12	57	42	32	33	43
0	2045	11	9	7	6	5	4	3	2	2	2	3	4	5	6	7	9	11	11	12	12	58	45	34	32	41
0	2046	11	9	7	6	5	4	3	2	2	2	2	3	4	5	6	7	9	11	11	12	58	48	36	33	39
335	LTA	11	9	7	6	5	4	3	2	2	2	2	2	2	2	2	2	2	2	2	2	60	100	88	56	39

Figure 1. The principle calculation matrices within the model worksheets.

The unborn child yield per 100 dwellings table (specified as cells -7 to -1 years) is used to calculate the Age 0 yield per 100 dwellings once the first year of development is completed, this Age 0 yield is in addition to the Age 0 yield arising from the number of developments to be completed in Year 2, and each year thereafter, for which the Age 0 yield rate from the Child Age Distribution table is applied. The model assumes that once the initial year of dwellings is completed that seven years after this point Age 0 yield will be equivalent to that arising from All Households. As such the yield per 100 dwellings in the -7 column is derived from the All Households single year of age yield per 100 dwellings relative to the development

proportional mix. The values within the -1 through to the -6 cells represent the incremental decrease in yield rate per 100 dwellings for Age 0 children from the initial higher Migrant Household yield to that experienced within All Households once the dwellings have aged 7 years. As this represents the difference in Age 0 yield minus the -7 yield with the result divided by the number of steps then the incremental decrease will always be uniform in size year on year.

It is perhaps easier to understand the Age 0 calculation process using an example. Consider that in Year 1 of a development there were 220 dwellings built, the anticipated Age 0 yield is calculated by multiplying the number of dwellings completed by the Age 0 yield per 100 dwellings arising from the Child Age Distribution table. If the Age 0 yield is 6.8 per 100 dwellings then the Age 0 yield in Year 1 in effect becomes $(220/100) \times 6.8 = 15$ children. In Year 2 there were 390 dwellings built which becomes $(390/100) \times 6.8 = 26$ Age 0 children. However, there is also an Age 0 yield arising from the 220 developments completed in the previous year for which the -1 year cell becomes the multiplier per 100 dwellings.

The multiplier for years -1 to -6 is the stepped difference between -7 and Age 0 which are the All Households and Migrant Household Age 0 yields per 100 dwellings determined from the relevant bed size proportionate mix. For the example presented herein it is assumed that -1 = 6.27, -2 = 5.75 and, -3 = 5.23 per 100 dwellings. The Age 0 yield for the dwelling already completed in the first year of the development is therefore calculated as $(220/100) \times 6.27$ (the unborn yield rate for -1 as the Age 0 yield for already completed developments decreases over time to the All Households rate at -7) = 14 children. The total Age 0 children yielded within Year 2 would therefore be 40 children.

In Year 3 there were 580 dwellings completed which becomes $(580/100) \times 6.8 = 40$ Age 0 children. However there is also the Age 0 yield from the previous two years of dwelling completion to add. The Age 0 yield arising from the previous year's completions would be $[(390/100) \times 6.27$ (-1 unborn yield) = 24 Age 0 children] + $[(220/100) \times 5.75$ (-2 unborn yield) = 13 Age 0 children]. The total Age 0 cohort therefore becomes $40 + 24 + 13 = 77$. In Year 4 there were 540 dwelling completions which becomes $(540/100) \times 6.8 = 37$ Age 0 children. Added to this are the Age 0

yields from the three previous years dwelling completions which are $[(580/100) \times 6.27 \text{ (-1 unborn yield)} = 36] + [(390/100) \times 5.75 \text{ (-2 unborn yield)} = 22] + [(220/100) \times 5.23 \text{ (-3 unborn yield)} = 12]$. The total Age 0 yield in year 4 would therefore be 107 children.

The Age 0 calculation process continues in this manner year on year although once the development is completed there will be no migrant Age 0 component adding to the total yield within this band. In this instance the Age 0 cohort will arise solely from the dwellings completed in previous years until the development is 7 years past the overall year of completion at which point the Age 0 contribution arises solely from the total number of dwellings built overall multiplied by the All Household yield rate (-7 unborn children data). As such seven years after development completion the number of children born year on year will be uniform.

1.2 TIMESCALES FOR DEVELOPMENT COMPLETION

The number of dwelling completions each year entered into the Trajectory worksheet automatically appears within the Timescales for Development table in the model sheets. The “Running Total” row within this table is an annual summation of the build total across the trajectory. The Total column sums each row of data respectively and conditional formatting checks the row totals against one another, where there is discrepancy then the cell background will flag as red indicating to the user that an error has occurred. The number of dwelling completions each year is used to directly calculate the number of persons in conjunction with the yield per 100 dwelling rates.

1.3 POPULATION BY AGE YIELDED FROM THE PROPOSED DEVELOPMENT

The main yield for the development trajectory is based on a matrix which calculates by year of dwelling completions the population likely to arise (Figure 2). Dwelling completions information entered into the “Trajectory” worksheet automatically populates the “Dwellings” column of the matrix, the development start date links as

the first date within the Year column, subsequent years are simple “plus one” functions from the initial date.

Dwellings	Year	Age 0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
67	2016	4	3	2	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	1	1
67	2017	7	7	5	3	2	2	2	1	1	1	1	1	1	1	1	1	1	1	2	3
67	2018	10	10	9	6	4	3	3	2	2	2	1	1	1	1	1	1	1	1	2	3
67	2019	14	13	12	10	7	5	4	3	3	2	2	2	2	2	2	2	2	2	2	3
67	2020	16	17	15	13	11	8	6	5	4	3	3	2	2	2	2	2	2	2	3	4
67	2021	19	19	18	17	15	12	9	7	5	4	4	3	3	3	3	2	2	2	3	4
42	2022	20	21	21	19	17	15	12	9	7	5	5	4	4	3	3	3	3	3	3	4
0	2023	19	20	21	21	19	17	15	12	9	7	5	5	4	4	3	3	3	3	3	3
0	2024	18	19	20	21	21	19	17	15	12	9	7	5	5	4	4	3	3	3	3	3
0	2025	17	18	19	20	21	21	19	17	15	12	9	7	5	5	4	4	3	3	3	3
0	2026	17	17	18	19	20	21	21	19	17	15	12	9	7	5	5	4	4	3	3	3
0	2027	16	17	17	18	19	20	21	21	19	17	15	12	9	7	5	5	4	4	3	3
0	2028	16	16	17	17	18	19	20	21	21	19	17	15	12	9	7	5	5	4	4	3
0	2029	16	16	16	17	17	18	19	20	21	21	19	17	15	12	9	7	5	5	4	4
0	2030	16	16	16	16	17	17	18	19	20	21	21	19	17	15	12	9	7	5	5	4
0	2031	16	14	16	16	16	17	17	18	19	20	21	21	19	17	15	12	9	7	5	5
0	2032	16	14	14	16	16	16	17	17	18	19	20	21	21	19	17	15	12	9	7	5
0	2033	16	14	12	14	16	16	16	17	17	18	19	20	21	21	19	17	15	12	9	7
0	2034	16	14	12	12	14	16	16	16	17	17	18	19	20	21	21	19	17	15	12	9
0	2035	16	14	12	10	12	14	16	16	16	17	17	18	19	20	21	21	19	17	15	12
0	2036	16	14	12	10	10	12	14	16	16	16	17	17	18	19	20	21	21	19	17	15
0	2037	16	14	12	10	8	10	12	14	16	16	16	17	17	18	19	20	21	21	19	17
0	2038	16	14	12	10	8	8	10	12	14	16	16	16	17	18	19	20	21	21	19	17
0	2039	16	14	12	10	8	6	8	10	12	14	16	16	16	17	18	19	20	21	21	19
0	2040	16	14	12	10	8	6	6	8	10	12	14	16	16	16	17	18	19	20	21	19
0	2041	16	14	12	10	8	6	6	6	8	10	12	14	16	16	16	17	18	19	20	19
0	2042	16	14	12	10	8	6	6	6	6	8	10	12	14	16	16	16	17	18	19	19
0	2043	16	14	12	10	8	6	6	4	6	6	8	10	12	14	16	16	16	17	18	18
0	2044	16	14	12	10	8	6	6	4	4	6	6	8	10	12	14	16	16	16	17	17
0	2045	16	14	12	10	8	6	6	4	4	4	6	6	8	10	12	14	16	16	16	17
0	2046	16	14	12	10	8	6	6	4	4	4	4	6	6	8	10	12	14	16	16	16
444	LTA	16	14	12	10	8	6	6	4	4	4	3	3	3	3	3	3	3	3	4	6

Figure 2. The matrix for calculating population yield arising from a proposed development.

The calculation process for determining the Age 0 children arising from the proposed development with each progressive year is as explained in Section 1.1 above. The yields arising from the first year of dwelling completions are the simplest calculations within the matrix. They are based on the dwellings completed in the first year divided by 100 and multiplied by the relevant age yield per 100 dwellings for migrant households as shown in Figure 1. The cell backgrounds for population yields within the initial year of the build programme are highlighted a different colour to delineate the fact that their calculation functions are different from other cells. For the second year of dwelling completions the yield for Age 0 children is as described previously. The Age 1 second year yield is calculated as the number of dwellings completed in Year 2 multiplied by the Age 1 migrant household yield per 100 dwellings and adding the roll forward Age 0 children from Year 1, this functionality therefore extends diagonally across the matrix for all years and person ages. It should be noted that

people occurring within previous years of dwellings completions are assumed to not migrate in a similar manner to the application of cohort survival modelling. Where a household did leave a development then it would be replaced by persons typified by the same demographic characteristics of wholly moving households (Technical Appendix 2).

Highlighted numbers which appear as bold within each column represent the maximum or peak number of that age to facilitate determining in which year of development they occur. This is a conditional format set on the basis of each individual cell value versus the age column peak value as shown at the base of the matrix (in turn a simple “Max” function). The row of data appearing in Year 8 of a development has a different cell colour to delineate a change in formula within the Age 0 calculations.

The change in function at Year 8 reflects the fact that those dwellings completed in Year 1 have an Age 0 yield dependent on the -7 unborn child yield (Figure 1) arising from the single year of age average yield of All Households dependent on the development proportional mix. Therefore at this point a sum function is incorporated within the equation so that further years of Age 0 calculations will incorporate the All Households (-7 unborn) average yield for all dwellings completed in the 7th year plus prior to the current year of dwelling completions.

Following this point a functional statement has been introduced to the equations for which the purpose is to compare the single year of age yield arising from the development to the expected Long Term Average value. Should the yield from the development be larger than that from the LTA then the development yield value is returned. If the Long Term Average value is higher than the calculated development yield then the LTA is returned. The single year of age LTA values are as shown at the bottom of the matrix and are derived from the All Households single year of age yield for the development proportional bed size mix. These yield values are then multiplied by the total number of dwellings built in the development divided by 100 (the yield rates are per 100 dwellings) to derive the long term average number of children expected for each year of age. It is important to emphasise that the functional statement is not an artificial raising of the child yield post development but

rather an algorithm to smooth the transition from peak value to the expected long term average.

The final point to make is with regards to the calculation of total population especially with consideration of the cohort age 75+. As a development progresses then the oldest cohorts will age and, in real life, would be subject to higher mortality rates than the general population. The age 75+ cohort would include persons significantly older than this whom would not be expected to survive over a thirty year projection horizon and as such they must be removed. This would prevent artificial inflation of the total cohort number arising from the proposed development which would otherwise impact on the financial contributions sought for library, waste and other sectors. Whilst various methods were trialled to reduce the cohort size the simplest method was determined by applying a 0.8 multiplier to the group. This reduces the percentage representation of the initial Age 75+ cohort following year 1 of development inception, and as it ages over time, by that shown in Figure 3. It can be observed that the initial cohort is represented at 100% in Year 1, reducing to only 10% surviving by Year 10 and 1% by Year 20.

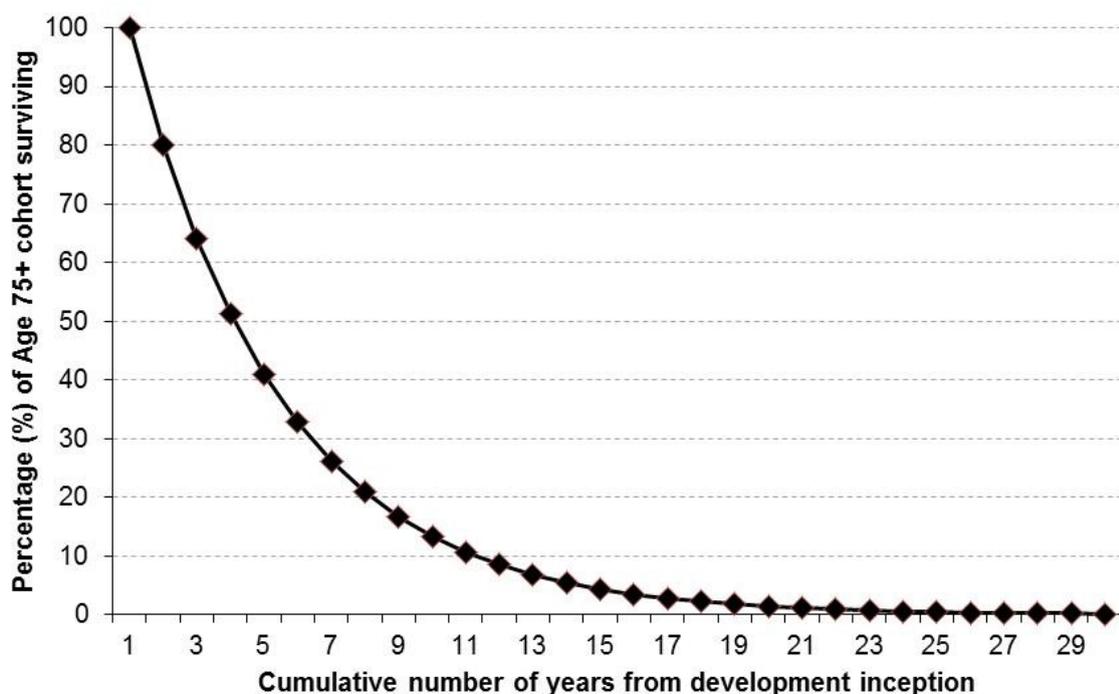


Figure 3. The percentage (%) survival rate, over a thirty year projection period, of the initial Age 75+ cohort arising from a proposed development.

1.4 THE SUMMARY POPULATION YIELDED FROM THE PROPOSED DEVELOPMENT

The final table within the model worksheets is an aggregation of age groups to those specified by, and required for, service delivery (Figure 4). The summary table displays the year on year variation in sector yield resulting from the proposed development as the trajectory progresses. Pre-school age children are determined from the sum of those aged 0 to <4, Primary are those aged 4 to <11, secondary those aged 11 to <18 years and so forth for the requested population age groups. The secondary yield takes account of the Post-16 stay on rate entered to the Illustrative Mix. Conditional formatting has been set within the summary numbers table to highlight in the cell background where the sector peak values occur. The peak values are determined within a separate table beneath the summary numbers table and are derived using a simple “Max” formula related to the summary table array.

<i>Number of Persons Yielded from the Development</i>															
Nursery/Child Care					0 to <4 years	5 to <14 years	13 to 19 years	Primary (4 to <11 years)	11 to 17 Years	First (4 to <9 Years)	Middle (9 to <13 Years)	to 17 years)	Age 55+	Age 65+	Total Population*
0 Years	1Year	2Year	3Year	4Year											
12	11	7	5	4	36	19	14	18	10	15	7	7	43	23	345
24	23	18	12	9	77	40	25	40	20	33	14	13	87	46	700
35	35	30	23	17	123	66	36	67	31	55	22	20	131	68	1063
45	46	42	36	27	168	96	46	103	42	86	31	28	177	91	1435
54	56	53	47	40	209	136	57	149	54	126	42	35	223	115	1814
62	65	63	58	51	248	186	69	204	68	173	54	44	272	139	2201
70	73	72	68	62	283	246	81	266	83	226	70	53	323	163	2593
77	81	80	77	72	316	315	95	334	101	281	90	63	375	189	2991
84	88	88	86	81	346	390	111	406	122	335	117	75	431	215	3394
91	95	95	93	90	374	471	129	479	149	385	153	89	489	243	3803
86	91	95	95	93	367	538	138	531	174	417	188	100	507	248	3871
81	86	91	95	95	353	605	153	574	209	442	226	115	528	255	3936
77	81	86	91	95	335	668	179	607	252	458	263	138	552	263	3997
74	77	81	86	91	318	721	214	627	301	464	296	163	579	273	4056
72	74	77	81	86	304	760	258	635	356	460	324	207	609	284	4111
70	72	74	77	81	293	784	308	631	411	448	346	248	642	296	4166
70	70	72	74	77	286	794	364	638	466	430	363	231	678	310	4219
70	70	70	72	74	281	793	422	599	515	409	373	332	717	325	4271
70	61	70	70	70	270	782	479	576	555	390	374	367	758	341	4314
70	61	61	70	70	261	764	531	551	586	375	367	396	801	359	4357
70	61	53	61	70	244	741	574	530	605	363	353	419	846	378	4390
70	61	53	53	61	235	716	607	505	610	347	335	434	893	399	4423
70	61	53	46	53	229	682	627	476	605	325	318	439	941	421	4448
70	61	53	46	46	223	643	635	445	592	299	304	434	990	445	4473
70	61	53	46	40	223	604	631	411	572	269	293	421	1039	470	4490
70	61	53	46	40	223	562	618	379	550	239	286	404	1088	437	4505
70	61	53	46	40	223	519	599	343	526	213	273	384	1136	525	4514
70	61	53	46	40	223	479	576	308	506	194	253	367	1183	554	4522
70	61	53	46	40	223	437	551	276	483	178	229	352	1228	583	4523
70	61	53	46	40	223	396	530	253	455	167	199	342	1270	613	4523
70	61	53	46	40	223	352	505	233	425	159	173	326	1310	643	4517
70	61	53	46	40	229	213	136	196	126	151	83	87	1000	662	3553

Figure 4. The summary population age group table as specified for service delivery.

Often the primary peak yield arising from a proposed development will occur four years after the pre-school peak as the highest Age 0 yield transitions into primary

stage. It follows that the secondary peak will be seven years after the primary peak as these children transition into the secondary sector. Long term average(LTA) numbers are calculated to determine the likely number of children by sector which will be yielded from the proposed development once it transitions to All Households.

1.5 POPULATION YIELD GRAPHS AND PRINTOUT WORKSHEET.

The “Yield Graphs” worksheet is populated with an aggregation of the output data arising from all of the model worksheets, it is a table and graphical output of the calculation processes undertaken to derive a development yield over time within the age band sectors. For example the “Units and Type & Tenure” output is the summation of the four model sheets which calculate a development yield wherein a distinction by bed size is made for Houses and Flats by Tenure. The only selectable field within this worksheet relates to the whether the user wishes to display Numbers of Persons or relevant calculated Forms of Entry data. Clicking in the green cell presents a pick list from which a user can select the relevant data item (Figure 5).

Year	Select Yield Age Range			Unit No:s and Type & Tenure
	Primary (4 to <11 Years)			
	3 Year			
	4 Year			
	0 to <4 Years			
2016	5 to <14 Years			32
2017	13 to 19 Years			68
2018	Primary (4 to <11 Years)			109
2019	Secondary 11 to 17 Years			156
2020	First (4 to <9 Years)			211
2021	274	273		272
2022	329	328		328
2023	363	363		362
2024	393	393		393
2025	416	416		416
2026	426	427		427
2027	423	425		424
2028	409	412		411
2029	386	391		389
2030	359	364		362
2031	329	335		333
2032	300	306		305
2033	276	283		281
2034	256	263		261
2035	240	247		244
2036	227	233		229
2037	215	221		217

Figure 5. The “Units Only”, “Units and Type” and “Units and Type & Tenure” populace yielded over the trajectory period.

Hertfordshire County Council

Pupil Yield Survey



Methodology for a census of resident mainstream pupil yields from new build housing developments within the boundary of Hertfordshire.

Contents

	No: Pages
1.0 Overview	
2.0 INTRODUCTION	8
2.1 PURPOSE OF THE PUPIL YIELD SURVEY	
2.2 EMERGING DfE PUPIL YIELD METHODOLOGY.	
3.0 WHEN ARE EDUCATION CONTRIBUTIONS GENERALLY SOUGHT?	5
3.1 VARIABLES AFFECTING PUPIL YIELD CALCULATIONS.	
4.0 ADMINISTRATIVE CENSUS VERSUS SURVEY & SAMPLE.	11
4.1 PRINCIPLE DATA SOURCES.	
3.1.1 SMART HERTS.	
3.1.2 THE SCHOOLS CENSUS.	
3.1.3 BIRTHS DATA & GP REGISTRATIONS.	
3.1.4 GEO & SOCIO-DEMOGRAPHIC PROFILING.	
4.2 ANNUAL STUDY PERIODS AND DEVELOPMENT SIZE THRESHOLDS.	
5.0 INFORMATION GOVERNANCE AND THE GENERAL DATA PROTECTION REGULATIONS (GDPR – MAY 2018).	6
5.1 THE INFORMATION ASSET REGISTER (IAR).	
5.2 DATA PROTECTION IMPACT ASSESSMENT (DPIA) & PERSONAL DATA INFORMATION (PDI) FORM.	
5.3 THE PRIVACY NOTICE (PN).	
5.4 BIRTHS INFORMATION – DATA SHARING AGREEMENT (DSA) AND DATA ACCESS AGREEMENT (DAA).	
6.0 PUPIL YIELD STUDY OVERVIEW.	2
7.0 SMART HERTS DATA SETS PROCESSING.	11
7.1 OVERALL PERMISSIONS DATA FILES.	
7.2 RESIDENTIAL COMPLETIONS DATA FILES.	
7.3 PERMISSIONS SIZE_TYPE DATA FILES.	
7.4 KNOWN LIMITATION OF THE PERMISSIONS AND COMPLETIONS DATA.	
7.5 TRAJECTORY OF DEVELOPMENT COMPLETIONS.	
8.0 GIS ANALYSIS OF SMART HERTS DEVELOPMENT POLYGONS.	15
8.1 DEVELOPMENT BUFFER AND COTERMINUS POSTCODE FILES.	
8.2 DEVELOPMENT ADDRESS EXPORT FILES.	
9.0 THE SCHOOLS CENSUS MAINSTREAM & SPECIAL SCHOOL PUPIL RECORDS.	9
9.1 CLEANSING SCHOOL CENSUS ADDRESS RECORDS.	

9.2	EDUCATION SECTOR COUNTS BY DEVELOPMENT UPRN.	
10.0	PROCESSING BIRTHS DATA.	3
11.0	GP REGISTRATIONS DATA & COTERMINUS POSTCODES.	8
11.1	DETERMINATION OF COTERMINUS POSTCODES.	
11.2	EXAMPLE OF GP AND MAINSTREAM COTERMINUS POSTCODES DATA ANALYSIS.	
12.0	MERGING GIS/SMART HERTS & SCHOOL CENSUS DATA SETS.	8
12.1	MASTER DEVELOPMENT COHORT.	
12.2	SUMMARY ADDRESS OUTPUTS.	
12.3	MASTER ADDRESS FILE.	
12.4	TRAJECTORY.	
12.5	SCHOOL CENSUS UPRN COUNTS.	
13.0	ANALYSING GROSS & NET YIELDS.	13
13.1	THE ARITHMETIC MEAN YIELD AND THE WEIGHTED AVERAGE YIELD.	
13.2	CALCULATING NET YIELDS	
13.3	STATISTICAL TESTS FOR NORMALITY.	
13.4	SEND YIELDS.	
13.5	PUBLIC ACCESSIBILITY OF RESULTS.	
14.0	CALCULATING LONG TERM AVERAGE (LTA) MAINSTREAM YIELDS.	17
14.1	APPLYING OFFICIAL POPULATION ESTIMATES TO CALCULATE THE LTA.	
14.2	UPDATING DWELLING UNITS ONLY LTA VALUES.	
14.3	DWELLING TYPE LTA CENSUS OUTPUT AREA BASED VALUES.	
14.4	DWELLING TYPE LTA POSTCODE AREA BASED VALUES.	
14.5	SAMPLE BASED ASSESSMENT OF MAINSTREAM LTA YIELDS.	
14.6	RECOMMENDED LTA METHODOLOGY.	
15.0	DETERMINING DEVELOPMENT TYPOLOGY.	4
15.1	STAGE 1: THE LOCAL PLAN.	
15.2	STAGE 2: KEY CHARACTERISTICS.	
15.3	STAGE 3: POST-DEVELOPMENT DATA.	
15.4	EMERGING TIER CLASSIFICATIONS.	
16.0	LIMITATIONS OF THE PYS METHODOLOGY.	3
17.0	PROVISIONAL PYS COHORT SIZES.	1
18.0	REFERENCES.	3
	A NOTE ON SPECIAL EDUCATIONAL NEED (SEN).	5
	A NOTE ON TERMINOLOGY APPLIED IN THE ANALYSIS OF PUPIL YIELD.	3

APPENDIX 1 INFORMATION GOVERNANCE.	3
APPENDIX 2 PROCESSING ANNUAL RESICOMPS DATA FILES.	3
APPENDIX 3 SIZE_TYPE PERMISSIONS DATA FILE PROCESSING.	2
APPENDIX 4 ONS GEOPORTAL AND THE NATIONAL STATISTICS POSTCODE LOOKUP (NSPL).	3
APPENDIX 5 QUERY STRUCTRES BUILT INTO THE SCHOOLS CENSUS DATABASES.	9

LIST OF TABLES

		PAGE No:
Table 1	The AddressBase Class Code classification scheme for included residential dwellings	Section 7, page 2
Table 2	The School Census National Curriculum Year Group Code and returned Education Sector.	Section 8, page 8
Table 3	Example standard format list of UPRN versus education sector mainstream pupil counts.	Section 8, page 9
Table 4	An example of a Units Only listing of PPREF and the longitudinal sum of primary mainstream pupil counts observed for each permission.	Section 12, page 1
Table 5	An example of the PYS trial Units Only cumulative dwelling completions over time by permission reference number (PPREF).	Section 12, page 2
Table 6	Sample derived LTA mainstream sector yields per 100 dwellings at Units Only, House Only and, Flats Only (2019).	Section 13, page 15
Table 7	The combined ≥ 10 to < 30 and ≥ 30 development cohorts per annum.	Section 16, page 1

LIST OF FIGURES

		PAGE No:
Figure 1	The high-level overall components to the Pupil Yield Study.	Section 5, page 1
Figure 2	A development of 68 dwellings wherein there results multiple rows of size_type data due to different providers, dwelling types and tenures.	Section 6, page 7
Figure 3	An example of the trajectory determined from SMART Herts data sets for 2,440 Houses Only, and the	Section 6, page 11

calculated development average mainstream primary yield per 100 houses, arising from the initial HCC Pupil Yield Study trial.

Figure 4	Scenario 1 for determining development coterminus postcodes.	Section 7, page 7
Figure 5	Scenario 2 for determining development coterminus postcodes.	Section 7, page 8
Figure 6	Scenario 3 for determining development coterminus postcodes.	Section 7, page 9
Figure 7	Scenario 4 for determining development coterminus postcodes.	Section 7, page 10
Figure 8	Example map of a development currently under construction with the level of detail in such instances displayed.	Section 7, page 12
Figure 9	A development within the 2002_2003 annual cohort with the postcode overlays displayed and the 200m buffer zone shown. The coterminus postcode cohort for each development is a subgroup of the buffer postcodes.	Section 10, page 3
Figure 10.	The mainstream primary yield per 100 dwellings for Houses Only from the 2002_2003 annual cohort based on (1) Estimates from the 730 houses within the 28 coterminus postcode areas 2002 to 2019 and, (2) All 1,402 houses in the annual cohort from 2007 to 2019.	Section 10, page 5
Figure 11	Comparison between the PYS All Houses (n = 2,440) normalised primary mainstream yield per 100 dwellings to that estimated using coterminus postcode data (houses only n = 835).	Section 10, page 6
Figure 12	Age 0 to <3 years estimated yield per 100 dwellings (Units Only, Houses Only, Flats Only) using the coterminus postcode method applied to the PYS trial cohort of 41 developments.	Section 10, page 7
Figure 13	The accumulation of normalised mainstream pupil rates per 100 dwellings for the 2,440 houses included in the PYS trial study.	Section 12, page 3
Figure 14	The percentage of Hertfordshire mainstream primary age cohorts relative to the relevant ONS Mid-Year Estimates of Primary age within the authority.	Section 13, page 2

Figure 15	The Office for National Statistics Lower, Target and Upper population and household counts by census geography (Source: Office for National Statistics).	PAGE No: Section 13, page 5
Figure 16	Required sample size based on the percentage representation of the characteristic of interest, level of precision and, confidence interval (Source: National Audit Office – Statistical & Technical Team – A practical Guide to Sampling).	Section 13, page 13
Figure 17	The location of randomly selected dwellings (n = 2,641) within the boundary of the authority based on the applied method.	Section 13, page 15

COMMON ABBREVIATIONS

AMR	Annual Monitoring Report
AP	Alternative Provision (Education)
AR	Affordable Rented (dwelling tenure)
ASC	Annual Schools Census
BLPU	Basic Land and Property Unit
CI	Confidence Interval
CIDS	Community Intelligence & Data Science team
CIL	Community Infrastructure levy
COU	Change Of Use
DfE	Department for Education
DAA	Data Access Agreement
DPA	Delivery Point Address
DSA	Data Sharing Agreement
EPA	Education Planning Area
ESC	Education Support Centre
FE	Form of Entry
FoI	Freedom of Information
GDPR	General Data Protection Regulations (2018)
GIS	Geographical Information System
HCC	Hertfordshire County Council
HELAA	Housing & Economic Land Area Availability
ICO	Information Commissioners Office
IDP	Infrastructure Development Plans
LA	Local Authority
LAD	Local Authority District
LEA	Local Education Authority
LLPG	Local Land and Property Gazetteer
LP	Local Plan
LPA	Local Planning Authority
LTA	Long Term Average
MoE	Margin of Error
NCYG	National Curriculum Year Group
NHBC	National House Building Council
NLPG	National Land and Property Gazetteer
NPD	National Pupil Database
NPPF	National Planning Policy Framework
NSA	National Statistics Authority
NSPL	National Statistics Postcode Lookup (ONS)
OM	Open Market (dwelling tenure)
ONS	Office for National Statistics
OS	Ordnance Survey
PAF	Postcode Address File
PAO	Primary Addressable Object
PD	Postcode Directory (ONS)
PE	Point Estimate
PLASC	Pupil Level Annual Schools Census
PRU	Pupil Referral Unit (Education)
PPG	Planning Practice Guidance

PWC	Population Weighted Centroid (of postcode or Output Area)
RM	Royal Mail
RUC	Rural Urban Classification (ONS)
SAO	Secondary Addressable Object
SD	Standard Deviation
SDC	Statistical Disclosure Control
SE	Standard Error
SEN	Special Educational Need
SEND	Special Education Need & Disability
SHLAA	Strategic Housing Land Availability Assessment
SIMS	School Information Management System
SLASC	School Level Annual Schools Census
SMART	Spatial Planning Monitoring, Analysis and Reporting
SNPP	Sub-National Population Projections (ONS)
SR	Social Rented (dwelling tenure)
TCPA	Town and Country Planning Act
PRU	Pupil Referral Unit
UPN	Unique Pupil Number
UPRN	Unique Property Reference Number

1.0 Overview

Hertfordshire County Council (HCC) is responsible for ensuring the provision of a range of services to its resident population and seeks contributions from developments which would have an additional impact on service provision. The process through which contributions, financial or in kind, are generally sought is by the establishment of planning obligations which are intended to make acceptable developments which would otherwise be unacceptable in planning terms.

Historically estimates of early years, primary and secondary pupil yields arising from new housing developments have a varied approach between authorities and developers and data to support these negotiations has often been limited. A more consistent, robust and defensible basis is achieved through informed up-to-date evidence of actual mainstream pupil yields from development, at both the plan preparation and application stages. In 2019 the Department for Education (DfE) published preliminary guidance which specifically addressed the issue of developer contributions towards education requirements, including information about the necessary supporting evidence.

It can be provisionally indicated that the council Pupil Yield Study will include 1,076 developments containing 51,479 dwellings constructed within the boundary of the authority across 19 annual cohorts in the period 2002 to 2020. This assessment will far exceed the number of developments, and dwellings, reviewed in other authorities. The methodology applied by Hertfordshire County Council is presented herein although it is recognised that it is a “live process” and subject to continuous refinement and progression.

In summary and as a result of the emerging Pupil Yield Survey evidence, HCC has reviewed the strategic approach to plan-making to adopt a three tier approach to plan making and has adjusted the Hertfordshire Demographic Model to ensure outputs are supplemented with observed survey data to support the decision-making process. Information about plan making can be found in the Local Plan Engagement Document, while the adjustments to the Hertfordshire Model are detailed in the Guide to the Demographic Model.

2.0 Introduction

Hertfordshire County Council (HCC) is responsible for ensuring the provision of a range of services to its resident population and seeks contributions from developments which would have an additional impact on service provision. Local authorities differ according to the amount of space they have for developments, if they have shrinking or growing populations, whether they are an area of housing growth, the types of development being implemented and where the new builds are taking place.

The process through which contributions, financial or in kind, are generally sought is by the establishment of planning obligations which are intended to make acceptable developments which would otherwise be unacceptable in planning

terms. The HCC approach to seeking obligations is set out in the Guide to Developer Infrastructure Contributions 2021.

Information relating to population yield is necessary for assessing complex infrastructure requirements for the future which in turn can impact on an area's demography. It is broadly acknowledged that estimating the number of children expected to live in a new housing development can be difficult to estimate due to the wide range of factors that affect the outcome (Rockwell et al. 2005).

However, information relating to pupil yield, across all school age stages, from new build housing is necessary for assessing school's capacity, the potential development of new schools and, can result in less land being available for residential developments. There is a significant body of evidence that a high-quality built environment of schools and other settings can also have a direct and positive impact on the quality of learning (Reading Borough Council 2004).

Generally new housing developments place additional pressures on school places through inward migration into an authority and by the redistribution of the existing population into areas where existing schools are at capacity or do not exist within a reasonable distance (Cumbria County Council 2011). Schools need to be located as centrally as possible to serve their catchments and generally also provide a focus for the provision of other community facilities (Cambridgeshire County Council 2009).

Hertfordshire County Council (HCC) is the authority with statutory responsibility for the provision of education services including the provision of sufficient school places for nursery, primary, secondary and sixth form age pupils. Provision must also be made available for children with special needs and childcare spaces in the early year's sector.

In January 2019 HCC undertook a research project into mainstream pupil yields arising from new Hertfordshire residential housing developments. This work has been in development since 2019 and it is intended that the work will continue to be supplemented with up to date information as it becomes available.

The following sections explain the approach taken and describe the methodology in detail. Further enquiries or questions regarding this report should be directed to the following email address: growth@hertfordshire.gov.uk

2.1 Purpose of the Pupil Yield Survey

Local Planning Authorities (LPAs) and developers plan around the strategic overview in their processes such as allocation of land parcels and financial resourcing and increases to modelled mainstream pupil yields raises their risks as well as those of HCC. The high-level approach to plan-making is intended to minimise the chances of underestimating the impact of new development and so should reduce the potential risk of children being without a school place. Equally, having regard to planning legislation, it is important to avoid over-estimating the child yield so as not to seek planning obligations which exceed the impact of a

development. Pupil yield rates from new developments can change over time, dependent in part upon transitional demographic and household characteristics.

In 2019 the Department for Education (DfE) published guidance¹ which specifically addressed the issue of developer contributions towards education requirements, including information about the necessary supporting evidence. The guidance includes several high-level principles, including that pupil yield factors should be based on up-to-date evidence from recent housing developments.

2.2 Emerging Pupil Yield Methodology from the Department of Education

In April and November 2019, the Department for Education (DfE) issued non-statutory guidance on the determination of pupil yield factors from recently completed housing developments. Whilst the DfE have yet to produce a detailed recommended methodology HCC has been in close communication with central government senior project managers, and analysts, associated with the project. HCC has been able to ascertain that, at high level, the methodologies are very similar between the two independent studies.

The DfE continues to indicate that locally held evidence to support any pupil yield method should be used where available. It is incumbent on the county council to assess emerging proposals against evolving methodology and locally held data now. It is acknowledged that this data will develop and become even more robust over time. Prior to presenting the HCC methodology applied it is important to both understand when education contributions are sought by the authority and what factors affect the likely level of contribution. The latter effects the design of any study into Pupil Yield from new housing developments.

3.0 When are education contributions generally sought?

Contributions for education places are commonly sought where schools are already oversubscribed or have been projected to become so. Literature suggests that consideration should be given to projections of pupil growth based on local demography to ensure enough capacity for the existing resident population. This holistic approach, to consider the total proposed developments within an area, is used by some authorities to prevent developers from avoiding contributions through dealing with a site via more than one planning application.

Overall, factors that influence when a contribution is sought include:

- Development size (total number of dwellings).
- Development location.
- School capacity in the area (for primary and secondary aged pupils), allowing for known and projected growth.
- Early years (childcare and pre-school) capacity in the area.
- Development composition, published literature indicates that sometimes the following are excluded from providing an education contribution:

¹ Securing Developer Contributions for Education, DfE, April 2019.

- Bed Sits, Studio and one-bedroom properties.
- Sheltered accommodation.
- Hostels.
- Student accommodation.
- Specialist elderly housing such as rest homes and nursing homes.
- Redevelopment or housing development schemes which do not increase the number of family houses.

Where it is identified that there are insufficient school places then a developer is often expected to provide:

- The full capital cost of providing new education buildings or extending / refurbishing / remodelling existing buildings (including ancillary facilities such as toilets, storage, hall space, additional parking and, staff facilities).
- The full cost of related fittings, furniture and equipment.
- The provision of, or full cost of acquiring, land and/or rights over land required.

Several authorities seek to provide additional places within existing schools as this maintains stability in the school system, provides places in a timely fashion and, achieves the best value for money. However, where the predicted pupil yield from a development is sufficiently large that it exceeds capacity, or where it is not feasible to expand a school, then a new school may be required to address the shortfall.

3.1 Variables affecting pupil yield calculations

General factors for increased pressures on school capacity can occur from a rise in population birth rate, greater inward migration to an authority, parental choice of one school above another and new housing developments (Lancashire County Council 2011). A number of local authority's state that the level of contribution sought from developers depends on the type of housing that is intended to be developed. For example, a development of large family dwellings would be expected to generate a higher number of primary and secondary age children than a development of one- and two-bedroom houses. However, it is not uncommon for there to be uncertainty around the size of large new developments and the mix of housing generated within them (EMIE & NfER 2006). The type of accommodation, tenure and size are broadly acknowledged to influence the child yield as will the locality of a development (Hollis 2005 and the Greater London Authority 2005).

Tenure often relates to two broad groups: social housing and market housing. Social housing is provided by a landlord based on housing need and rents are no higher than target rents set by the government for housing association and local authority rents. Market housing relates to owner-occupied and private rented housing which does not meet the affordability and access criteria for social housing or intermediate housing. EMIE and NfER (2006) reported that it is an accepted convention that pupil yield from new housing varies with the size of properties and many authorities use formulae based on the number of bedrooms. However, in some authorities there are local circumstances in which smaller properties are more densely occupied and yield higher numbers of pupils than might be expected, such as: rented (especially short-term lettings); developments including social housing; flats and; developments in areas of rising house prices.

Overall from a review of published literature common base data required for estimating mainstream pupil yield should, where possible, include the following variables:

- Dwelling Type – identifying flats and houses separately.
- The number of bedrooms in each dwelling.
- Tenure – distinction between social rented and private ownership.
- Number of children by age in each dwelling – for pre-school, primary and secondary school ages (including Post-16 where appropriate).

Some authorities apply discounts for affordable housing. However, to simply discount contributions from affordable dwellings, to reflect their lower market value, does not change the number of pupils likely to arise from the development requiring education. Such discounts would only serve to increase risk both to the provision of sufficient school places for children and to the public purse.

The open market dwellings within a new development are just as open to local private ownership/private rented residents. The presumption is that families in local open market dwellings in the locality are less likely to move into dwellings within a new build development. A discount presumes that families moving locally to new build affordable housing have in the most part reached parity such that they create little further demands on education, this is unlikely to be the case. Housing demands with many councils are significant and for many years HCC has had the lowest proportion of vacant dwellings of all Shire authorities. The significant demand for housing is indicative that backfill of properties with family units containing children will occur. Demand for local school places will not be negated through families moving into new build developments.

Affordable rented (AR) and social rented (SR) dwellings are well known to have higher mainstream yields than that of equivalent bed size open market dwellings although the proportional representation to total dwelling stock is substantially lower. The higher single dwelling yields for AR/SR tenure types results in calculated single dwelling financial contribution costs which are substantially larger than that of open market dwellings.

4.0 Administrative census versus survey and sample

There are several methods which could be used to determine mainstream pupil yields from new build developments such as postal, telephonic, electronic (online form submittals) or “on the ground” door to door. However, the precision, accuracy and confidence of outputs from many of these is dependent upon the sample/survey framework, sample/survey size, response rate, available resources (both human and financial) and type of survey. Survey type relates to random sample selection, weighted, clustered, stratified and so forth with each having their own pros and cons.

The central theme is that a survey, or sample, provides results from which inferences can be made to the population as a whole and therefore must be representative of this population with avoidance of bias at all levels. For example, an electronic survey would exclude those persons without access to the internet, door to door knocking in daytime excludes those persons out at work, voluntary responses only include those persons prepared to spend the time to submit a response and so forth. Surveys tend

to be specific to areas where new developments have occurred, and their robustness is directly proportional to the sampling methodology and response rates. Yields determined from samples or surveys tend to be more specific than demographic ratio methods and take into account factors such as accommodation type (house or flat), size (number of bedrooms) and tenure (affordable and market housing) which are accepted to influence overall child yield from a development. Due to the expense and resource intensity of conducting surveys generally only those developments with a number of dwellings larger than five or ten are often included as this limits the number of sites that have to be visited.

Whilst surveying, or sampling, is a means of providing information with respect to a "whole population" without the need to examine that population in its entirety (termed a census) data determined from a sample permits reliable inferences to be made about the population as a whole only when the Confidence Interval and Confidence Level are known. The Confidence Interval (CI), also referred to as the Margin of Error (MoE), is the plus-or-minus figure usually reported alongside survey results.

For example, if a confidence interval of 3 is applied to a survey and 58% of respondents picks a particular answer it can be "sure" that if the question had been asked of the entire relevant population then between 55% and 61% ($58\% - 3\%$ and $58\% + 3\%$) would have responded similarly. The wider the confidence interval the more certainty there is that the whole population answer would be within the specified range, however offset against this is that this widening impacts upon the possible range of the answer itself. For example, a confidence interval of 8 when applied to the 58% answer would give a range of between 50% and 66% of the entire population responding similarly.

The Confidence Level (CL) informs as to how "sure" one can be of the survey result, 58% with a range from 55% to 61% in the above example (confidence interval of 3), when applying the answer to the relevant population. The confidence level is expressed as a percentage and represents how often the true percentage of the population would pick an answer which lies within the confidence interval. The confidence level and confidence interval are expressed together such that, for example, one can state a 95% certainty that the true percentage of the population is between 55% and 61%. When a confidence level of 95% is applied then this indicates that one can be 95% certain, at the 99% confidence level one can be 99% certain. The confidence level statistic is commonly referred to as the Type 1 Error risk.

The most commonly used confidence level applied within research is the 95% confidence level. A 95% level of confidence means that 5% of the samples or surveys will be off the wall with numbers that do not make much sense. Therefore, if for example 100 surveys are conducted using the same question, then five of them will produce results that are abnormal. Normally researchers do not worry about this 5% because they do not repeat the same question over and over so the odds are that they will obtain results among the 95%.

There are three factors which determine the size of a Confidence Interval at a given Confidence Level, these are of relevance for general understanding:

- Sample size: The larger the sample size then the higher the certainty that the survey answers truly reflect that of the population itself. As such, for a given confidence level, the larger the sample size then the smaller the confidence interval. However, it should be noted that this relationship is not linear such that doubling the sample size does not halve the confidence interval.
- Percentage of responses: The accuracy depends on the percentage of a sample that selects a particular answer, for example, if 96% of the sample responded "Yes" to a particular question and 4% responded "No," then the chances of error are remote irrespective of the sample size itself. However, if these responses were 52% and 48% then the chances of possible error would be much greater, it is therefore easier to be sure of extreme answers than those that are 50:50. A 50:50 situation, whether in consideration of responses to a question "Yes/No" or the percentage of the population believed to have a particular attribute/characteristic under investigation, represents the likelihood of the largest possible errors. At the 50% level the sample sizes required, for a defined confidence level and confidence interval are much larger than where the attribute, characteristic or percentage of responses is 80%. The "worst case" 50% value is often applied where it is necessary to determine a general level of accuracy for a sample/survey already taken.
- Population size: The mathematics of probability prove that the size of the population under study is generally irrelevant unless the size of the sample exceeds a few percentage points of the total population being examined. The survey system therefore ignores the population size when it is "large" or unknown. Population size is only a factor normally considered when using a relatively small and defined group.

The application of confidence interval calculations assumes a genuine random sample of the relevant population. If a sample is not truly random then the intervals are not reliable, non-random samples usually result from some flaw or limitation in the sampling procedure. Authorities which apply a sample to determine pupil yield from new build developments tend to focus on known completed developments which introduces bias into the assessment. Whilst it is less resource intensive to focus on a specific large development there may be specific characteristics associated with the development, such as typology, which produce yields that are not representative of the "whole" population of new build which occurred over a defined period. Such results would be "indicative" rather than statistically robust measures of the actual mainstream yield arising from the whole population of new build dwellings over time. Application of such estimates should be applied with caution to proposals which do not meet the observed attributes of the surveyed development. Results from randomised new build dwelling surveys should always be published with the CI/CL. For example, a randomised survey determines a yield of 35 primary mainstream pupils per 100 dwellings, the CI is $\pm 5\%$ and CL 95% (industry standard). The true population yield from new build dwellings can therefore be determined to lie between 30 and 40 per 100 dwellings. In a development of 1,000 dwellings the yield would therefore be between 300 and 400 mainstream primary pupils which is a substantial range.

HCC has applied an administrative census which removes the error element associated with many of the aspects of surveys and samples, it is a study of all dwellings which satisfy the population inclusion criteria. Where the entirety of a

defined population is surveyed then this is not a sample and no Margin of Error is obtained, the result is specific to the whole population as all individuals within the population have been surveyed for a response. HCC considers the population under consideration to be defined as the number of completed dwellings of specified residential classifications arising from developments solely within the boundary of Hertfordshire County Council. All dwellings included in the population were lawfully erected through the Town and Country Planning system as evidenced by planning permission consent being granted by the relevant Local Planning Authority. Each dwelling included within the population was determined to have a development construction start and completion date. Whilst larger phased developments may not be completed in entirety during the inclusion year, the dwellings included within the population in each study year from such developments were identified as occurring either in entirety, or in a phase, which was associated with the commence of producing residential completions in the period. This inclusion criteria permitted the collation of phased developments starting in the same year, but completing in different years, to the same annual cohort.

The application of an administrative census aligns with the work and methodology currently being applied by the Department for Education; it is therefore a homogenous approach. As such the HCC Pupil Yield Study is a census of the whole population of new build dwellings although this is on condition that the necessary data is required and available on a statutory basis. In this context it is a legal requirement for the information to be collected/provided and therefore the whole population is subject to these conditions such that no bias can be introduced. Consideration of databases held internally within HCC determined that statutory planning/dwellings information could be sourced via SMART Herts whilst mainstream pupils could be determined from the Schools Census return.

4.1 Principle data sources

Three principle sources were identified for the data required in the Pupil Yield Study.

4.1.1 SMART Herts

HCC utilises a monitoring system termed the SMART (Spatial planning, Monitoring, Analysis and Reporting) system which records amongst various factors planning permission applications and dwelling completions. The system is jointly used by HCC, and all the districts, and is a web-based data repository for legally required planning and building related information entered by the districts, building control and, annually provided National House Building Council (NHBC) updates, which enables centralised reporting. SMART Herts therefore provides a centralised repository of data relating to both residential and commercial planning applications and completions within the authority area.

SMART Herts picks up all dwelling gains and losses through the Town and Country Planning system. A new dwelling cannot be constructed outside of the system aside from within Permitted Development rights. However, information on the latter is also collated under Prior Approval applications within the same regime and added to the database. Conversions, such as from an office to a block of flats, are also included within the system. Any enforcement appeals would also be included as HCC applies

a system which checks the Planning Inspectorate website. Any dwelling construction not picked up would therefore result from either human error (generally unlikely as both HCC and the Districts validate the data) or be illegal development. The authority collates completions and permissions data in conjunction with, and primarily on behalf of, the Districts as an evidence base for their Local Plans and statutory returns to Government. The data set provided is therefore considered to represent the whole population of completed developments. Within the authority SMART Herts access is generally via the Environment & Infrastructure Directorate, Planning Infrastructure & Economy, Strategic Land Use team.

4.1.2 THE SCHOOLS CENSUS.

The 1996 Education Act (section 537A) provided a statutory requirement for each school in England and Wales to return a pupil census to the then named Department for Education and Skills (DfES). This was originally known as the Form 7 return and mainly dealt with total pupil numbers although, by 2002 schools were asked for the first time to supply detailed information about each pupil including names and address postcode (January each year). Termed the Pupil Level Annual Schools Census (PLASC) this was replaced in 2007 with the Schools Census which is now the Department for Education's (DfE) largest and most complex data collection exercise. Data is provided to the Department for Education for all pupils on a school's admission register on a termly basis. Data is provided to the Department for Education for all pupils on a school's admission register in accordance with:

- Regulation 5 of the Education (Pupil Registration) (England) Regulations 2006
- The Education Act 1996 - section 434 (1), (3), (4) & (6) and section 458 (4) & (5)
- The Education (Pupil Registration) (England) Regulations 2006
- The Education (Pupil Registration) (England) (Amendment) Regulations 2010
- The Education (Pupil Registration) (England) (Amendment) Regulations 2011
- The Education (Pupil Registration) (England) (Amendment) Regulations 2013

The School Census is a statutory data collection for all maintained nursery, primary, secondary, middle-deemed primary, middle-deemed secondary, local authority maintained special and non-maintained special schools, academies including free schools, studio schools, university technical colleges and city technology colleges in England. Pupil Referral Unit/Alternative Provision (PRU/AP) establishments are legally defined as schools and are also included (comprising pupil referral units, 'AP' academies and 'AP' free schools). Collected data is core to the National Pupil Database (NPD) and accuracy is therefore highly important with zero errors expected by the DfE. HCC as the education authority collates the School Census data on behalf of its schools for submittal to the DfE.

Within Hertfordshire alone the School Census provides over 190,000 individual pupil records of school age children, this excludes the approximately 8,000 pre-school children aged three-and-four years reported in the Private, Voluntary and Independent (PVI) sectors from the Early Years Census return. All records are subject to extensive data validation during the submittal process and local authorities, on behalf of the DfE, actively pursue amendments where validation errors occur and as such finalised data sets are as accurate as possible. Within the authority the finalised schools census data sets are held within the Resources

Directorate, Information and Technology, Intelligence Services, Data Collection Team.

4.1.3 Births data and GP registrations

The Population (Statistics) Act 1938 gave the Registrar General power to collate any information obtained by registrars in the process of birth and death registration which is needed for statistical purposes (some amendments made by the Population [Statistics] Act 1960). The information includes confidential items regarding a birth or death which do not appear in the public register and may be used 'only for the preparation and supply of statistical information'. The Statistics and Registration Service Act 2007 (SRSA) came into force on 1st April 2008. Section 39 of the SRSA governs the confidentiality of personal information held by the United Kingdom Statistics Authority and its executive office (the Office for National Statistics).

All information held by ONS and which relates directly or indirectly to a person (whether living or dead) is protected by section 39 of the 2007 Act. Disclosure of identifying information is an offence, unless an exemption to that offence applies. Section 42 of the SRSA created a new legal gateway between the Registrar General and ONS, enabling the Registrar General to provide ONS with any information entered in any births and deaths register, as well as any other information received by the Registrar General in relation to any birth or death. This includes all categories of information collected as part of the birth and death registration process.

Section 42(4) of the SRSA (as amended by the Health and Social Care Act 2012) includes provision for the ONS to supply information on individual births and deaths for the purpose of assisting the Secretary of State or the Welsh Ministers, or any one of a list of health-related organisations to enable them to produce statistics or carry out statistical analysis. This means that disclosive personal information of the specified type can be passed by ONS to the NHS or other health bodies, including local authorities when acting in their health role only, provided the information is used only for the purpose of producing and analysing statistics.

However, onward disclosures by those bodies of this information to non-listed bodies are not authorised by the SRSA. A full risk assessment must be carried out before making the decision to release identifying data. Within HCC it was identified that Public Health colleagues have a Data Sharing Agreement and Data Access Agreement with NHSDigital/ONS for provision of individual record deaths data from 2006 to present and individual record births data from 2008 to present. It is the sole route by which access could be granted to identifying births information and was considered important for inclusion in the wider study to determine birth prevalence by dwelling type, bed size and tenure.

The authority produces a School Place Planning Forecast, part of the data which underpins the DfE required forecast is GP registrations data for children aged 0 to 7 years by anonymised counts to postcode area. The Pupil Yield Study will cross match postcode sector counts of children aged <5 years to development co-terminus postcodes to produce an annual county wide sample-based assessment of yields in the early years from new build developments. The use of postcode small area

geographies permits the determination of early years yields by new build dwelling type although, to date, much of this work has been suspended with prioritisation of the mainstream yields study. Further work is required to determine whether bed size and tenure distinctions can be determined. These assessments will be essential in the longer term for the accurate location of localised early years services and childcare provision.

4.1.4 GEO & SOCIO-DEMOGRAPHIC PROFILING.

Profiling is based on socio-demographic segmentation tools used by both commercial and non-commercial organisations to better understand their customers/clients. Some tools are Public Sector created specifically for use by authorities to classify their citizens into one of several Groups and detailed Types, and each has its own likely characteristics such as demographics, location, lifestyles, motivations and behaviours. Generally, such analysis is based on household level, not individuals, and can utilise more than 450 data variables sourced from a combination of proprietary, public and, trusted third party sources. Such information is not actual household data; rather it is modelled analysis of expected household characteristics.

Although classifications discriminate between households, it does not mean that the authority has data on individuals residing in households but rather indicates expected characteristics from similar households around the UK. As new properties are built, or converted and inhabited, they are automatically placed into a group which reflects this type (occupants of brand-new homes who are often younger singles or couples with children). As the data footprint of the family increases and improves over time their segment classification will change to better suit their specific lifestyle. This can provide information on the likely characteristics of residents whom occupy new build developments. There are two types of profiling that the authority can apply: socio-demographic and geo-demographic.

There are two key resources applied in profiling; Household and Postcode level data. This data is normally contained in a spreadsheet with a record for every household in Hertfordshire (approximately 500,000) detailing the full address, AddressBase Unique Property Reference Number (UPRN), Ordnance Survey Grid References, and the corresponding Group & Type classification assigned to that household.

The most common way in which geo-socio-demographic data is used in the authority is by taking local data which contains record level information by home address and matching to Group and/or Type in order to determine their characteristics. Due to contractual obligations much of the data at household, or postcode level, cannot be shared outside of HCC although aggregates such as characteristics of people in identified completed new build developments can be released at county level.

4.2 Annual study periods and development size thresholds

In the PYS trial the time period was defined as the annual financial years 1st April 2012 to 31st March 2013 and, 1st April 2013 to the 31st March 2014. Since successful completion of the trial study annual financial period cohort extracts from 1st April to 31st March for each year 2002 through to 2020 have been implemented from SMART

Herts². This permits the longitudinal examination of mainstream pupil yields from unique annual development cohorts across a 19-year period. The PYS annual new build development completions 2002_03 to current financial period, and inclusion of large developments within the 1990's, once complete will far exceed the number of developments reviewed, either by the DfE (within a single local authority area) or any other local authority.

In the PYS trial only developments ≥ 30 dwellings in size were initially included in the study. This occurred due to observed difficulties with successfully geolocating poor quality School Census address records to small area development polygons. However, refinement of the method, to that presented herein, has enabled the inclusion of developments ≥ 10 to < 30 dwellings in size within each annual cohort. Developments < 10 dwellings in size are excluded based on being deemed "windfall housing". Such dwelling completions are not planned by districts, but they generally help the achievement of district housing trajectories. Windfall housing is commonly disregarded in population projections due to its uncertain nature over the longer term. The inclusion of only those developments ≥ 10 dwellings aligns the Hertfordshire PYS with threshold sizes based on emerging DfE guidance.

Whilst the principle data sources and time periods for study were established consideration was first given to Information Governance and recording the flow of data streams within the county council Information Asset Register prior to further work commencing.

5.0 Information governance and the General Data Protection Regulations (GDPR May 2018)

HCC processes personal information to enable the authority to provide a range of government services to local people and businesses and as such is registered as a Data Controller with the Information Commissioners Office (ICO) under Registration Number Z6406154³. A substantial amount of information is provided within this section to ensure that HCC analysts are fully informed as to requirements and how they relate to the PYS. An indicative range of government services which the authority provides, the types of information relevant to these services, sensitive classes of information and, examples of the types of persons that HCC processes data about is given in Appendix 1.

It is also displayed within the privacy statement of the authority's website that HCC analyses existing service data to ensure that the authority can provide the services needed in the future. On occasion this data is compared or combined with population data from other sources, official data from the Office for National Statistics, NHS Digital or, commercial sources. The information is not used to identify individuals, but rather non-identifying aggregates are used to forecast future demand such as for school places, social care and, health trends. There is also public interest in authority finances being appropriately reimbursed by private developers for services that HCC will be required to provide for the future both in support of such developments, and in

² Prior to 2011 planning permission applications were recorded in a different system called "DEMONS", data was transferred to SMART Herts following implementation of the latter replacement system in 2011.

³ <https://ico.org.uk/ESDWebPages/Entry/Z6406154>

ensuring that the LA can meet its statutory duty to provide sufficient education/child care places.

HCC indicates that dwelling completions datasets for the period 1st January 2012 to 31st December 2013 sourced from SMART Herts are not considered as personal data beyond contact details for land agents, developers and descriptors regarding a development type, bed size and proposed tenure. This information is already within the public domain. However, the project requires the geolocating of anonymised schools census and births information to development polygons to determine aggregate cohort counts. The application of potentially identifying personal information therefore requires appropriate consideration of the General Data Protection Regulations (2018).

5.1 The Information Asset Register (IAR)

In order to be compliant under new Data Protection legislation, HCC needs to maintain an Information Asset Register (IAR) holding "key elements", these are:

- Data items – what personal information are held - such as name, address, email etc and other sensitive data such as health data, criminal records.
- Format of the stored data – for example is this hardcopy, electronically on a purpose-built system, or standard office software such as an Excel spreadsheet.
- How the data is received and transferred – for example: is it collected electronically, paper through the post etc.
- Location – such as, is the data stored on the Shared Drive, internal, or external system or paper.
- Accountability – the person accountable for the service which uses this personal data.
- Access – who can access this data and what restrictions are in place

In order to map the data that HCC holds it is necessary to both understand, and be able to describe, the information or data flow from one location or system to another. For each function, or activity, that involves personal data HCC collects details to identify what happens to it and by which team, department or even third party. The Information Asset Register is a catalogue of the personal data/information HCC holds and processes, where it is stored, how the data/information moves and who the authority shares it with. A form is completed for each function or activity undertaken with the data and it is important that if the data is transferred to another team or department within HCC that this is clearly identified.

The IAR is therefore a table of information relating, initially, to personal and sensitive data collected or held within HCC. It contains the "Key Elements" and the legal basis for collecting and processing the data, together with other useful information. The IAR is updated and permits the consideration of the following aspects:

- Retention periods – ensure that data is being held for the correct time rather than 'forever'.
- Duplication – does the data need to be held on more than one format
- Legal Basis – there are 6 lawful bases for processing and the relevant one should be identified before processing starts, e.g. to meet a statutory duty of

HCC; to fulfil a contract with the person (data subject); consent of the data subject etc.

- Data Protection Impact Assessment (DPIA) – Needed when there is risk of harm, significant loss of privacy to the individual e.g. social care or health, cloud-based systems changed or implemented from May 2018 etc.
- Privacy Notice (PN) – This should be in place wherever HCC is collecting data direct from individuals. It should state clearly what we will do with the data collected, how long it is kept for and whether it is shared, it should also identify the lawful basis for processing personal data.

In compiling the Information Asset Register it is necessary to:

- Walk through the information lifecycle to identify unforeseen or unintended uses of data. This also helps to minimise what data is collected and how long it is held.
- Make sure the people who will be using the information are consulted on the practical implications.
- Consider the potential future uses of the information collected, even if it is not immediately necessary.

The basis of the information entered into the IAR comes from a Personal Data Information (PDI) form and should not be confused with the requirements of a Data Protection Impact Assessment (DPIA).

5.2 Data Protection Impact Assessment (DPIA) & Personal Data Information (PDI) Form

When HCC implements a new service or technical solution which changes the way the authority collects, stores or uses personal data it is necessary to check whether a Data Protection Impact Assessment is needed. The DPIA is a legal requirement where the following activities are undertaken:

- Processing personal data for a new service.
- Where a data sharing agreement is commenced or amended.
- If any significant change is made to the technology used within an existing service including upgrades or cloud storage.
- When undertaking profiling for service planning or other purposes.

One of the key principles of General Data Protection Regulation (GDPR) is Privacy by Design, that is planning and designing systems and processes to ensure personal data privacy. This includes implementing role-based access, appropriate security and only collecting the data that HCC needs. The quick guide tool indicated that for the Pupil Yield project, which incorporates schools census and births data, a DPIA was required. A DPIA and PDI were completed prior to commencement of the project and recorded the data that would be processed and the benefits/potential risks to both the individuals whose data was affected and to HCC as an organisation.

The completed DPIA further identified the timespan that the collected data was required for, staff access to the information and, technical security and processes required to ensure the data safety. The DPIA and PDI forms were assessed against the Information Commissioners Office (ICO) guidance by the HCC Data Protection

Team, this ensured that the appropriate measures were in place to mitigate identified risks. Further information regarding the DPIA and PDI can be requested from:

- DPIA data.protection@hertfordshire.gov.uk
- PDI information.governance@hertfordshire.gov.uk.

5.3 The Privacy Notice (PN).

The purpose of the Pupil Yield project was to undertake an administrative assessment of child yield per 100 dwellings (primary, secondary and births) arising from new build developments within the boundary of Hertfordshire. No data or information was collected directly from individuals for purposes of the survey. Data utilised in the examination was embedded within the statutory framework for which the authority is required to collect, and expected to project, future service demands. As such it was not necessary to produce a Privacy Notice.

5.4 Births information – Data Sharing Agreement (DSA) and Data Access Agreement (DAA)

NHS Digital is a corporate body established pursuant to section 252 of the Health and Social Care Act 2012 and is the national information and technology partner to the health and social care system⁴. NHS Digital collect and store some information from everyone's health and care records so that it can be used to run the health service, manage epidemics, plan, and research health conditions, diseases and treatments. They process and publish data and information from across the health and social care system in England. Civil Registration data via NHS Digital is replacing Office for National Statistics data supplies which removes the need for ONS Terms & Conditions and named users. This takes place under the legal basis of Section 42(4) of the Statistics and Registration Service Act (2007) as amended by section 287 of the Health and Social Care Act 2012 and Regulation 3 of the Health Service (Control of Patient Information) Regulations 2002.

Since April 2013 the Health and Social Care Act has provided local authorities with the power to perform public health functions. To deliver public health, local authorities need to use available health data sources to get relevant health and social care information. In order to access this information local authority's, require a Data Sharing Agreement (DSA) and a Data Access Agreement (DAA) with NHS Digital, these documents establish the framework within which data can be accessed and analysed amongst other statutory requirements. The births data for each defined local authority is securely distributed to the LA each quarter by NHS Digital together with an annual refresh of the births data containing any required updates.

The Director of Public Health is the Information Asset Owner for the births and deaths data and is responsible on behalf of the Local Authority to NHS Digital for ensuring that the data supplied is only used in fulfilment of the approved public health purposes as set out in the DSA. HCC has both a DSA and a DAA in place with NHS Digital (reference DARS-NIC-35699-L3K3Q-v2.4) and use of provided data is specifically covered within Section 5 (the Purpose). Within the DSA the authority as Data Recipient is recognised as the Sole Data Controller. NHS Digital retains

⁴ <http://www.isb.nhs.uk/library/standard/128>

copyright of the Data, application of births information as applied within this project is therefore acknowledged as: © Copyright 2020, re-used with the permission of NHS Digital (All rights reserved). The authority has a responsibility to ensure that any publication derived from the Data by any party complies with Anonymisation Standard for Publishing Health and Social Care Data guidance and Anonymisation: managing data protection risk code of practice. HCC has undertaken an organisational risk assessment exercise to ensure compliance with these guidelines and a Data Protection Impact Assessment (DPA Registration Number: Z6406154).

An overview of the project and the requirement for access to individual birth address information for the identified and finalised development polygons was submitted to NHS Digital via public health intelligence. At the request of NHS Digital amendments were made to both the Data Sharing Agreement and the Data Access Agreement. These documents which both grant access to the individual births information, and establish the framework within which the information can be used, are held by HCC.

6.0 Pupil Yield Study Overview

Figure 1 displays the overall processes associated with the principle data sets: SMART Herts, School Census and Births/GP Registrations. The initial step was the identification of developments which should be included within each annual cohort 2002_2003 through to 2019_2020.

Once developments satisfying the population inclusion criteria were identified SMART Herts data files relating to each development in each annual cohort were aggregated. Specific development polygons extracted from SMART Herts were used by the HCC GIS team to obtain *AddressBase_Premium* dwelling addresses by specific residential dwelling characteristics. Dwelling counts by type were compared to SMART Herts data sets to ensure totals matched in relation to total number of dwellings and counts by type specific to each permission. Master address files were created for each development and in aggregate for each annual study cohort.

The postcodes arising from the master address files were used to extract specific individual anonymised school census records from the January School Census return 2007 to 2020. For early cohorts between 2002 and 2006 January School Census records were extracted based on co-terminus postcode data. School Census records were address cleansed and Unique Property Reference Number (UPRN) identified. Linking the two data sets based on UPRN established mainstream sector counts by specific dwelling UPRN in new build dwellings over time. Longitudinal mainstream counts in aggregate for each development were determined and the arithmetic mean taken each year to determine the variance of average development yield over time within each study year. This was repeated for dwelling type in addition to dwelling units overall. Development typology was determined, and the analysis repeated to calculate mainstream sector yields for each development characteristic Tier.

The latter parts of the project: ACORN Household, FOI (HMRC & ONS) and SMART Herts Individual Dwelling relates to further work that needs undertaking once all annual cohorts are completed. ACORN is specific to geodemographic and socio-economic profiling of new build development populations. SMART Herts individual

dwelling involves the inclusion of bed size and tenure data for each dwelling completion recorded in the system 2020_2021 onwards. The Freedom of Information Act process relates to the obtaining of UPRN specific bed size and tenure data from HMRC/ONS for those dwellings to which HCC has been unable to assign this information. Each of these elements is discussed in greater depth in the proceeding sections.

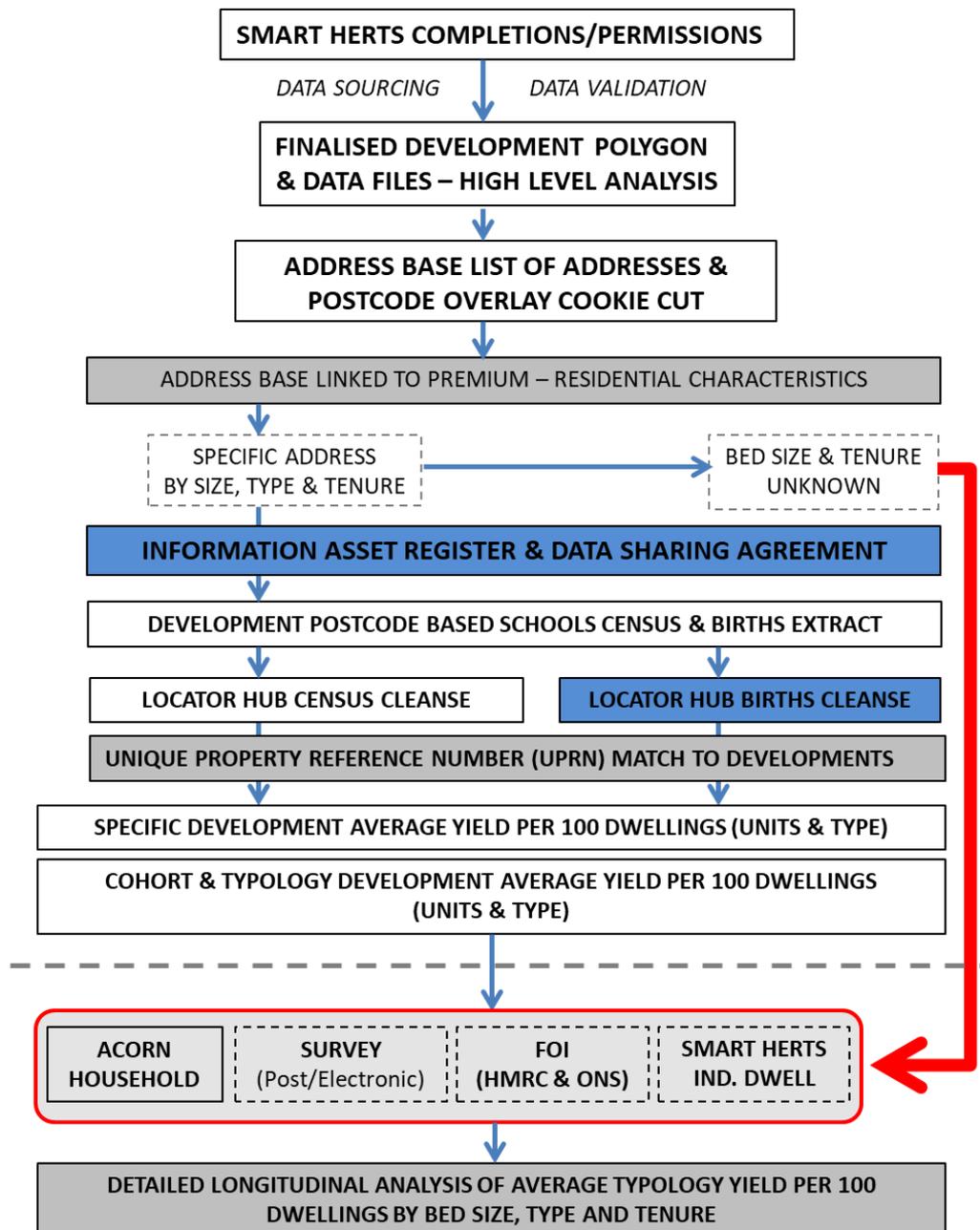


Figure 1. The high-level overall components to the Pupil Yield Study.

7.0 SMART Herts data sets processing

Within the authority SMART Herts access is via the Environment & Infrastructure Directorate, Planning Infrastructure & Economy, Strategic Land Use team whom ran

the relevant extract reports from the system. There were three principal data files extracted for each district for each financial year 2002 through to 2020:

- (1) Overall Permissions.
- (2) Residential Completions.
- (3) Size_Type Completions.

This generated 30 data files for all ten districts within each financial year with a total extract of 570 files for the whole study period 2002 through to 2020. Additional extract routines were run to obtain specific development polygons per annum for GIS analysis.

7.1 Overall permissions data files

The initial step undertaken was to establish the population of developments in the boundaries of Hertfordshire, for each annual cohort, which should be included within that specific year's assessment. The overall permissions data files relate to planning permissions indicated as current within the annual financial period under investigation. Developments were included in a specific annual cohort on the basis that residential completions began to be produced in the inclusion year (>0), but not prior to the inclusion year, and where the total gross permitted dwellings was ≥ 10 in count (this excludes developments which had dwellings under construction [UC code] but no completions in the financial period).

This enabled the determination of the annual development cohort ≥ 10 dwellings in size, the total gross proposed gains associated with these developments and, the count of residential completions in the first year of construction. No indication of C2/C4 (older persons, sheltered accommodation, Houses of Multiple Occupation etc) developments is available within these data files and as such all developments meeting inclusion criteria are considered at this point. Defined fields included within the determined annual cohort data table for each financial year were:

- LAD - Local Authority District Name
- LAD CD - Local Authority District Code (Office for National Statistics)
- PPREF – Unique Planning Permission Reference
- Unique Site Ref – The PPREF prefixed with the LAD CD
- Address – the site address as recorded in the system capped at 250 characters
- PDL – Previously Developed Land flag (Yes/No)
- Permission Granted – Date planning permission was granted for the PPREF
- Permission Lapses – Date planning permission for the PPREF lapses
- Permission Started – Date that construction started
- Permission Completed – Date that all works associated with the PPREF were completed.
- Total Proposed Gain – Total number of dwellings proposed within the PPREF
- Total Proposed Loss – Total number of dwellings proposed to be lost (demolition of existing dwelling stock on site)
- Total Proposed Net Gain – Calculated as Total Proposed Gain minus Total Proposed Loss
- Total Proposed Gain ≥ 10 Dwellings – Calculated flag of Yes/No based on Total Proposed Gain

- Completed to Date Gross Completions – the number of dwellings completed to date within the PPREF
- Completed to Date Net Completions – the number of net dwellings completed to date within the PPREF
- Gross Completions in PYS Financial Year – the number of gross completions in the PYS annual extract year
- Net Completions in PYS Financial Year – the number of net completions in the PYS annual extract year
- Gross Outstanding Commitments in PYS Financial Year – the gross number of dwellings which remain outstanding after the PYS financial year. Calculated as Total Proposed Gain minus Completed to Date Gross Completions
- Outstanding Commitments in PYS Financial Year U/C – the gross number of dwellings which are Under Construction but not completed in that year
- Outstanding Commitment in PYS Financial Year N/S - the gross number of dwellings which remain to be constructed following the current financial year
- Net Outstanding Commitments – the net number of dwellings which remain to be constructed following the financial year
- Application Type – Planning Application Type for example, Full or Reserved Matters
- Completions Started Prior to Current Year – calculated flag (Yes/No) as to whether gross residential completions had been produced prior to the current financial year (all rows to be “No” for inclusion in current annual cohort)
- In PYS Annual Cohort – calculated flag (Yes/No) as to whether the unique PPREF is included within that year’s annual cohort. If “Completions Started Prior to Current Year” = No and “Completed to Date Gross Completions” is >0 then flag = Yes
- Outstanding Commitments Check – Yes/No flag to indicate whether the system reported completions in year plus the outstanding commitments equals total gross proposed gain. Where Flag = No data returned to spatial planning for the PPREF for resolution.
- Inclusion Year – The financial year to which the development is allocated e.g. 2011/2012, 2015/2017, 2004/2005 etc

Developments ≥ 30 dwellings and ≥ 10 and < 30 dwellings were processed as separate annual cohorts. The final annual overall permissions files formed the basic table to which residential completions, GIS determined addresses and, size_type files were matched using the unique permission reference for each site (PPREF code).

The Overall Permissions files were also used to determine the total number of residential completions associated with all residential developments in the financial year under investigation. All developments were included in a specific annual cohort on the basis that residential completions began to be produced in the inclusion year (>0), but not prior to the inclusion year, irrespective of development total gross proposed gain. Effectively this included “Windfall” housing developments of < 10 dwellings in size such that the percentage of dwellings included in those developments ≥ 10 dwellings relative to the total dwellings relating to the specific financial period could be calculated.

Although the PYS is a census of all developments ≥ 10 dwellings in each financial year, and not a representative sample from which inferences within known statistical boundaries are made to the population as a whole, there is merit in determining the percentage of all dwellings built in the population of interest relative to the total for that year. For example, if a particular financial year had 1,000 dwellings included in the PYS from developments ≥ 10 dwellings in size then, despite being a census including all dwellings which meet the population of interest criteria, criticism could be levelled at the cohort size. If the total dwelling count constructed in that year was 1,200 dwellings, i.e. 200 dwellings occurred from windfall, then it can be observed that the census included cohort was 83.3% ($1,000 / 1,200 = 0.833$) of all dwellings constructed in the annual period. Despite being diminutive in size the census included 1,000 dwellings cohort would be in excess of 80% of all dwellings constructed in the period which would be greater than the proportions included within randomised samples based on the included population size. This approach increases the evidenced robustness of the overall Pupil Yield Study.

7.2 Residential completions data files

Individual District residential completions data files were aggregated to create singular annual financial year tables, the process undertaken is provided in Appendix 2. As with the overall permissions files fields were of consistent name and format between extract periods and descriptive text data limited to < 250 characters in length as required for import to ArcGIS. The consistency of format assisted in the replication of ArcGIS projects for annual survey periods with the replacement of underlying data files and polygons whilst, automated processes could remain consistent for efficiency. The principle data fields were:

- Report Year – the year to which the extract file related
- LAD – Local Authority District Name
- LAD CD - Local Authority District Code (Office for National Statistics)
- PPREF – Unique Planning Permission Reference
- Unique Site Ref – The PPREF prefixed with the LAD CD
- Address – the site address as recorded in the system capped at 250 characters
- Description – a description of the site as recorded in the system capped at 250 characters
- PDL – Previously Developed Land flag (Yes/No)
- Gross Comp in Period – the number of gross dwelling completions in the report year
- Loss in Year – the number of dwelling losses in the report year
- Net Comp in Period – the number of net dwelling completions in the report year
- Wislistperm – A unique identifier which relates the residential completions data to a polygon identifier.

These are “developments” which have involved the conversion or loss of residential dwellings with no replacements occurring. The unique identifier field PPREF was applied in looking up annual completions data to the developments included within the annual cohorts resulting from the overall permissions files. Values added to the

overall permissions files reflect the field names listed above. Additional fields relating to the overall permissions and residential completions data sets were added for:

- Total Proposed Gain Check – a formula to check the number of gross dwellings permitted in the overall permissions files versus the sum of the residential completions associated across one or more years for the development.
- Total Gross Completions – the sum of the gross residential completions observed for each specific development across one or more years specific to the PPREF.
- Match – Yes/No error function to determine whether the total proposed gain check equals the total gross residential completions data.

Where the checks returned divergent values then a mismatch between the overall permissions and residential completions data files occurred. Permissions where this occurred were investigated further, the most common reason for differences were partially superseded permissions or PPREFs which were sub-permissions of a larger development that came forward in parts. In such instances “Estate” files were requested from spatial planning which listed permissions by PPREF associated with complex sites.

Subsequent to the resolution of non-matches for all developments within an annual cohort the permission reference was cross referenced to a C2/C4 report from SMART Herts. Developments of C2 (older persons/residential care homes) and C4 (Houses of Multiple Occupation) do not represent the majority of dwelling stock within the authority from which mainstream school age pupils could arise and are excluded from the Pupil Yield Study. It was noted that C2/C4 development specific data files have not been used until more recently within the authority (2012/13). An additional check was therefore implemented such that the description field for each development was reviewed. Six additional fields were included within the data file for each annual cohort, these were:

- C2 Development from SMART Herts Report – Yes/No flag as to whether a development was identified as C2 from the specific SMART Herts report.
- C4 Development from SMART Herts Report – Yes/No flag as to whether a development was identified as C4 from the specific SMART Herts report.
- C2 Development from Description – Yes/No flag as to whether a development was identified as C2 from the site-specific description field.
- C4 Development from Description – Yes/No flag as to whether a development was identified as C4 from the site-specific description field.
- Include/Exclude in cohort – Include/Exclude Flag wherein developments indicated as C2/C4 were excluded.
- Reason Exclude – Notes field detailing the reason a site has been excluded for future reference.

Other than C2/C4 flagged exclusions the only other accepted reasons for not included a development within an annual cohort was: All addresses in the development Polygon do not have an AddressBase Premium dwelling classification Type which matches the criteria applied for inclusion within the cohort [Section 7]; Development Polygon does not reside wholly within the authority boundary. It is important to note that Residential Completions files also contain completions data for those developments which are specific residential losses only such that there will be

some non-matches between the unique identifier PPREF of the completions data to the Size_Type permissions files. The two data streams, although related, include disparate information and should be treated separately.

7.3 Permissions size_type data files

Individual District permissions size_type data files were aggregated to create singular annual financial year tables, the process undertaken is provided in Appendix 3. As with the overall permissions and residential completions files fields were of consistent name and format between extract periods and descriptive text data limited to <250 characters in length as required for import to ArcGIS. The consistency of format assisted in the replication of ArcGIS projects for annual survey periods with the replacement of underlying data files and polygons whilst, automated processes could remain consistent for efficiency.

Developments built out over more than 1 year and/or where there are multiple providers, dwelling types and/or tenure have multiple rows of data. Figure 2 displays an example size_type processed extract for a singular PPREF wherein there are multiple providers, dwelling types and tenures associated with the development and, the development took more than 1 year to complete.

Figure 2. A development of 68 dwellings wherein there results multiple rows of size_type data due to different providers, dwelling types and tenures.

PP Ref	ResLine Provider	ResLine Tenure Type	Dwelling Type	Number of completions	1 Bed Units	2 Bed Units	3 Bed Units	4+ Bed Units
07/14/0076/F	Housing Association	Social Rented	Flat, Apartment or Maisonette	12	0	12	0	0
07/14/0076/F	Housing Association	Social Rented	House	9	0	0	9	0
07/14/0076/F	Private	Market	House	47	0	0	20	27

The overall permissions and residential completions data sets collated to this point are singular rows of data per unique permission. The initial step undertaken in processing the size-type files was therefore to collate the multiple row data into a singular row for cross referencing to the annual cohort master files. For example, multiple providers were combined to “Private & Housing Association”, multiple tenures to “Open Market & Social Rented”, multiple dwelling types to “Flat, Apartment or Maisonette & House or Bungalow” and so forth. The principle data fields resulting from this process were:

- LAD – Local Authority District Name
- LAD CD - Local Authority District Code (Office for National Statistics)
- PPREF – Unique Planning Permission Reference
- Unique Site Ref – The PPREF prefixed with the LAD CD
- ResLine Provider – The provider type for the development, or part of development to which the size_type data row relates. For example, Private, Housing Association, Local Authority, Unknown
- Dwelling Type – House, Bungalow, Flat/Apartment/Maisonette
- ResLine Tenure Type – Tenure of dwellings within the row of dwelling type data
- Overall Units – Number of dwelling units associated with the tenure, dwelling type and provider row of the dwellings for all/part of the relevant permission

- 1 Bed Units – Count of 1-bed dwelling units
- 2 Bed Units – Count of 2-bed dwelling units
- 3 Bed Units – Count of 3-bed dwelling units
- 4+ Bed Units – Count of 4+ bed dwelling units
- Overall Houses – Number of the overall number of houses completed
- 1 Bed Houses – Count of 1-bed Houses
- 2 Bed Houses – Count of 2-bed Houses
- 3 Bed Houses – Count of 3-bed Houses
- 4+ Bed Houses – Count of 4+ Houses
- Overall Flats – Number of the overall number of Flats completed
- 1 Bed Flats – Count of 1-bed Flats
- 2 Bed Flats – Count of 2-bed Flats
- 3 Bed Flats – Count of 3-bed Flats
- 4+ Bed Flats – Count of 4+ Flats
- CHECK – formula which checks that the number of houses and flats equates to the total number of units which in turn equates to the total number of gross dwellings permitted (overall permissions) and residential completions.

The data items were referenced to the annual master files through linkage of the unique identifier PPREF.

Where the check field indicated a mismatch between the overall permissions and residential completions data associated with a unique permission reference versus the size_type data files for overall units (both in aggregate and per specific year of completions) then further work was undertaken to resolve. This was conducted by both referring the permission to spatial planning, GIS analysis of the polygon and, further research into the overall permissions and residential completions data files for further permissions possibly associated with the overall site.

7.4 Known limitation of the permissions and completions data

The Type (House or Flat), Tenure (Affordable/Open Market) and Bed Size data associated with each specific development as presented within the data files is correct as at the time which planning permission was granted. If there are local amendments to the agreed development mix between the Planning Authority and a developer subsequent to the granting of permission, or as a development progresses, then this will not necessarily be reflected in the permissions data file. Changes to the affordable dwelling element of a development would only be determined by comparing a developments permissions file to information held by district housing authorities regarding stock location.

There is currently no Information and Data Sharing Agreement in place with Districts to access this level of information to pick up any such amendments, however experience within HCC spatial planning indicates that this is not common. Dwelling completions can sometimes be associated to the wrong financial year for various reasons such as lag in paperwork, human error etc, but within the authority, and the Districts, these are thought to be infrequent and tend to be odd dwellings rather than large developments.

The SMART Herts data enables the determination of the location and magnitude, number of dwellings constructed, of each of the permitted and subsequently completed developments. The data also enables a determination of bed size mix, type and tenure of constructed dwellings associated with each development overall.

However, the individual addresses of each of the dwellings within a development is not available as a data extract nor is there relational data for each individual dwelling with regards to bed size, type and tenure. Specific address information is required to be sourced externally via AddressBase and AddressBase Premium products which also lack the detailed relational datasets. Aggregation of the developments to county level therefore provides an overall indication of the number of units completed by bed size, type and tenure over time. Information relating to the overall tenure and bed size is still required in order to compare the overall type, tenure and bed size mix of identified developments to observed mainstream yields from the school census.

The size_type data sets and individual address residential characteristics code from AddressBase Premium could also be applied to determine overall number of houses and flats, separately, by bed size and tenure for comparative analysis. Both the bed size and tenure of individual dwellings and, the addition of multiple size-type row data to the overall permission are work streams which will be conducted once the master annual cohorts are finalised 2002 through to 2020. This is of relevance to the ≥ 30 dwelling cohorts whilst many of the small development cohorts are of singular type, tenure and bed size for which this information can be obtained immediately. However, overall the aggregate counts of dwelling type from the size-type permissions enables cross comparison to residential dwelling classification types determined from the GIS analysis of development polygons.

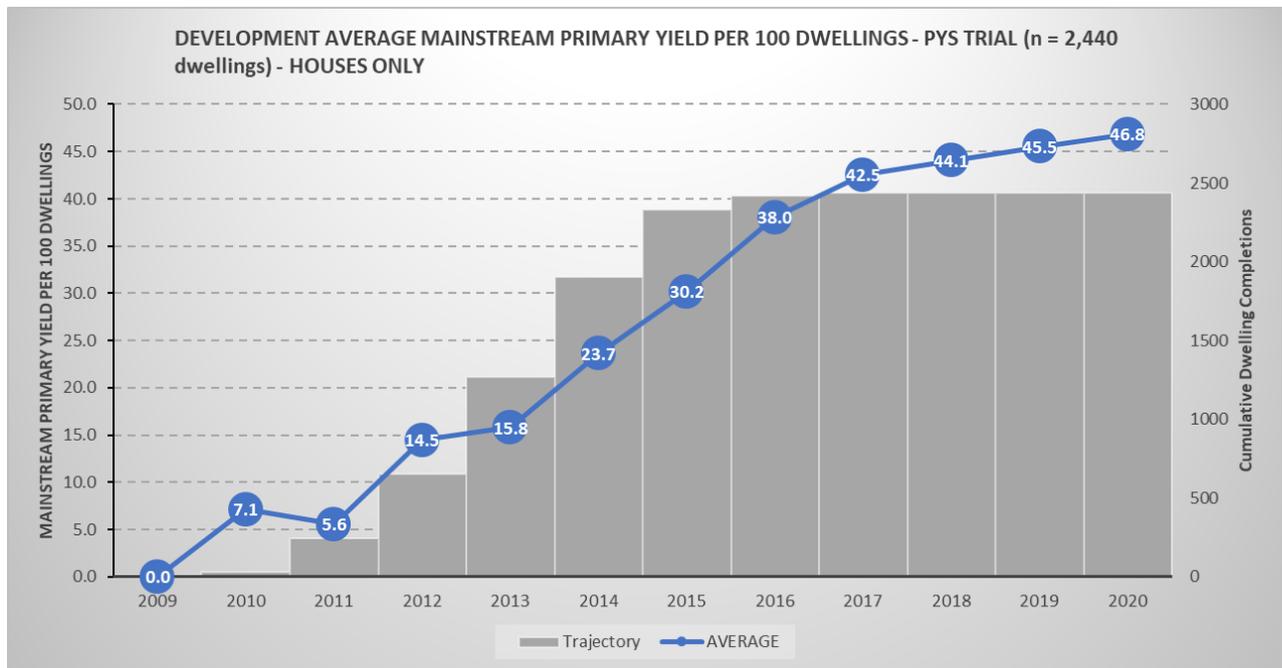
7.5 Trajectory of development completions

Unified counts of aggregate dwelling completions between the overall permissions, residential completions and size_type files permitted the creation of development trajectories specific to each permission. The residential completions files annual gross completions count per annum permits this at a Units Only level of detail whilst the size_type data allows for specific dwelling type (House or Bungalow and, Flat Apartment or Maisonette). Trajectories were constructed from the SMART Herts data sets for each permission within the annual ≥ 30 and >10 to <30 dwellings development cohorts.

The trajectory is important for calculating specific annual yield per 100 dwelling rates from the observed number of cumulative completions in a particular year versus the observed mainstream pupil counts from the school census data sets in that year. This is the case both for specific developments and the determination of development average yield for all permissions within an annual cohort. If only the total number of dwelling completions were applied, then calculated annual mainstream yields per 100 dwellings prior to development completion would be underrepresented. This occurs as the denominator (number of units, houses or flats) would be substantially larger than the actual number of completions which would have occurred at the mid-point of development construction. An example of the determined trajectory and associated mainstream primary yield per 100 dwellings displayed in Figure 3 below. The data presented results from the initial Pupil Yield

Study trial conducted by the authority and relates to 2,440 Houses Only, the principle is the same for Units Only and, Flats Only.

Figure 3. An example of the trajectory determined from SMART Herts data sets for 2,440 Houses Only, and the calculated development average mainstream primary yield per 100 houses, arising from the initial HCC Pupil Yield Study trial.



8.0 GIS analysis of SMART Herts development polygons

The annual cohort master files for each financial year based on the collation of SMART Herts overall permissions, residential completions and size_type files formed the principle PPREF list for GIS analysis. Financial, as opposed to calendar, periods were applied in the extract processes due to the origination of the development completion date. For some developments the completion date is provided by the National House Building Council, or LAD building control, upon issuance of a completion certificate or, via administrative desktop survey. However, in some cases the information is absent, and the completion date is determined via a field survey. If the survey determines a development to be completed, and a date is absent, the end of the financial year date, 31st March, is entered to the completion date field. Consequently, for a proportion of the completed developments it will be known that they were completed in the twelve-month period since the last survey, but this is not accurately transferable to calendar period.

Development polygons were extracted from SMART Herts for all developments on the system 2002 through to 2020. Whilst the polygons give the location of developments all underlying data associated with the shape files other than unique identifier (PPREF) was ignored. Only data from the provided master files was used. This was particularly relevant as the polygons include residential completions which are completions of “losses and gains” whereas the master files are gains only. The polygons associated with the developments were subject to an extensive GIS process. The Hertfordshire County Council corporate GIS solution, ArcGIS, was

used to process and analyse spatial data in support of this task. The ‘base’ address data used in the initial trial was Ordnance Survey AddressBase Premium Epoch 64 (released 17th January 2019)⁵ although updated versions were applied as they became available. GIS processing and analysis of the polygons involved several outcomes:

- Ensure all developments were within the boundary of Hertfordshire County Council.
- Establish an address master cohort for each development, and total count of dwellings, based on residential dwelling characteristics.
- Establish a coterminus and buffer postcode list for each development.
- Produce a map of each development in each annual cohort.

The annual cohort development site polygon data, recorded in the SMART Herts system, was exported as a series of datasets (in ESRI shapefile format) for each Local Authority District in Hertfordshire. These were appended to a pro-forma layer with a spatial extent set for Hertfordshire. Once compiled these polygons were used to spatially select from AddressBase Premium the Basic Land and Property Unit (BLPU) points which they contained. Through matching data from the AddressBase Premium Class Records table to the selected BLPU (Basic Land and Property Unit) using the Unique Property Reference Number (UPRN), and then from the Class Code to the AddressBase products classification scheme table, it was possible to assign a typology (Class Description) to each address contained within each development polygon. Several types were deemed to meet the project criteria in conjunction with customised ONS census defined output tables for unshared dwellings (Table 1).

Table 1. The AddressBase Class Code classification scheme for included residential dwellings.

CLASS CODE	CLASS DESCRIPTION
CR06	Public House / Bar / Nightclub
R	Residential
RB	Ancillary Building
RD	Dwelling
RD01	Caravan
RD02	Detached
RD03	Semi-Detached
RD04	Terraced
RD06	Self-Contained Flat (Includes Maisonette / Apartment)
X	Dual Use

Dual use records generally include a residential element, where this is the case, as determined by considering the individual address details and undertaking further research. For example, some dwellings were clearly businesses/residential mixed use such as a Farmhouse, Pub or, a business operating from a home. Dual use BLPU were uncommon and therefore included in the initial selection, relevant

⁵ Support and technical documentation for AddressBase Premium can be accessed here: <https://www.ordnancesurvey.co.uk/business-and-government/help-and-support/products/addressbase-premium.html>

records were rejected where it became apparent that they did not include residential quarters. A similar approach was taken with CR06 and RB classified records.

Following this a count of BLPU by development polygon was made from which it was possible to identify any development polygon which appeared to contain no residential records. These were few in number and each was investigated to determine what BLPU records were present and reassign an appropriate classification in any cases where it was clear from the details of the planning permission that a non-residential BLPU should be reclassified as a result of the development and associated Change Of Use (COU). Each AddressBase Premium record was attributed with the unique Planning Permission Reference (PPREF) of the development polygon within which it was contained and then filtered to include only those permissions in the annual cohort under consideration. At this point checks were undertaken to ensure that:

- The refined count of development polygons equalled that of the provided master files (based on unique PPREF count), such that there were no polygons absent.
- That there were no overlapping development polygons (all BLPU assigned to one permission [PPREF] only).
- That there was not a lack of BLPU meeting classification criteria within identified developments.

It was observed that some BLPU had not been re-classified since the permitted works were carried out and needed to be updated, some BLPU points 'missed' relevant development polygons and needed to be moved with notes indicating as such appended to the unit records. The subsequent step was to assign addresses to the records selected.

AddressBase is essentially the Postcode Address File (PAF) produced by Royal Mail, it is a "flat file" and simple to work with. Whilst there is no inclusive dwelling type information there are classification codes associated with each address record. The available classification codes are:

- C – Commercial (Attracts non-domestic rates and/or use is of a business nature).
- L – Land
- M – Military (Military Defence Site)
- O – Other (Ordnance Survey only)
- P – Parent shell
- R – Residential
- U – Unclassified
- X – Dual use
- Z – Object of Interest

Note that not all residential characteristics will necessarily occur within an area. Individual address records that were contained within the finalised development polygons were selected from AddressBase based on a residential classification code of "R – Residential", these specific addresses were then linked to AddressBase Premium. Data from the AddressBase Premium Class Records table were matched to the selected BLPU (Basic Land and Property Unit) cohort defined above using the

Unique Property Reference Number (UPRN), and then from the Class Code to the AddressBase products classification scheme table.

AddressBase Premium utilises multiple GIS files thereby requiring a relational database for application and is generally complicated to work with. Through the application of multiple polygons this product permits the determination of the characteristics of each address to provide information both on dwelling type and to further specify the R – Residential classification code from AddressBase. The “point-in-polygon” finalised development addresses previously identified within AddressBase were cross referenced to AddressBase Premium and only those address with the following residential sub-classification extracted:

- Residential
- Dwelling
- Detached
- Semi-Detached
- Terraced
- Self-Contained Flat (Includes Maisonette/Apartment)
- Ancillary Building

The following residential sub-classification codes were specifically excluded:

- Houseboat
- Sheltered Accommodation
- Privately owned holiday caravan/chalet
- Ancillary building
- Caravan
- Car park space
- Allocated parking
- Garage
- Lock-Up Garage/Garage Court
- House in Multiple Occupation
- HMO parent
- HMO bedsit/other non-self-contained accommodation
- HMO not further divided
- Residential institution
- Care/Nursing home
- Communal residence
- Non-Commercial lodgings
- Religious community
- Residential Education

This produced the final list of addresses associated with the validated and included development polygons, by unique site identification number. Prior to exporting finalised address cohorts, development specific buffer and coterminus postcode files were generated.

8.1 Development buffer and coterminous postcode files

Development postcode buffers contain the postcodes associated with a specific permission and those which occur in a 200m range of the boundary. In creating permission specific buffers, postcode layers were superimposed over the

development boundaries, where a postcode polygon intersected/overlay a boundary, or was within 200m, then the postcode was extracted. The relevant PPREF was assigned to each postcode for all developments in each annual cohort. Postcode buffer files were principally applied in the PYS trial study to extract school census records. Individual pupil records were cleansed and geolocated to development permissions using GIS in order to create mainstream pupil counts. These counts were compared to counts from a more specific direct address-in-polygon only school census extracts. It was observed that the more specific address-in-polygon method was as accurate as that of the buffer method and was subsequently applied to the main study.

To determine whether postcodes were wholly coterminous within development sites a combination of Codepoint Polygons and AddressBase Premium records were applied. Using both datasets a postcode was deemed coterminous with a development site if it contained residential addresses (determined using BLPU classes within AddressBase Premium) which fell within the site boundary but no residential dwellings beyond the site. Under this methodology a 'theoretical' postcode (as defined using Codepoint Polygons) which overlaps a development may go beyond the development significantly, but if there are no other residential dwellings aside from the ones within the site then it can be inferred that all addresses with such postcodes are attributable solely to that development site. There are four possible scenarios when determining coterminous postcodes using this methodology:

Scenario 1 – the development site falls completely within a single postcode polygon, and all residential BLPU's within that postcode fall within the development site. Therefore, all dwellings with such postcodes, it can be inferred, would fall within the development site (Figure 4). These development sites are accepted for analysis within the coterminus postcode cohort.

Scenario 2 – all postcodes which overlap the development site fall relatively neatly within it, and therefore all residential BLPU's with such postcodes can be attributed solely to the site. In some instances, postcode polygons may go beyond the site, however if no residential BLPU's are found within such areas then all dwellings within the postcode can still be attributed to the site (Figure 5). These development sites are accepted for analysis within the coterminus postcode cohort.

Scenario 3 – no postcode sits neatly within the development site, however there are no postcodes overlapping the site which contain residential BLPU's which fall both within and beyond the site. As such although 'theoretical' postcode polygons extend beyond the development boundary, the postcodes of all residential BLPU's within the site only belong to dwellings within the site, and therefore such postcodes can be attributed solely to the site (Figure 6). These development sites are accepted for analysis within the coterminus postcode cohort.

Scenario 4 - some postcodes which overlap the development site contain residential BLPU's which fall both within and beyond the development site. As such it is not possible to determine that dwellings within such postcodes solely fall within the development site and therefore these development sites are not accepted for coterminus postcode analysis (Figure 7).

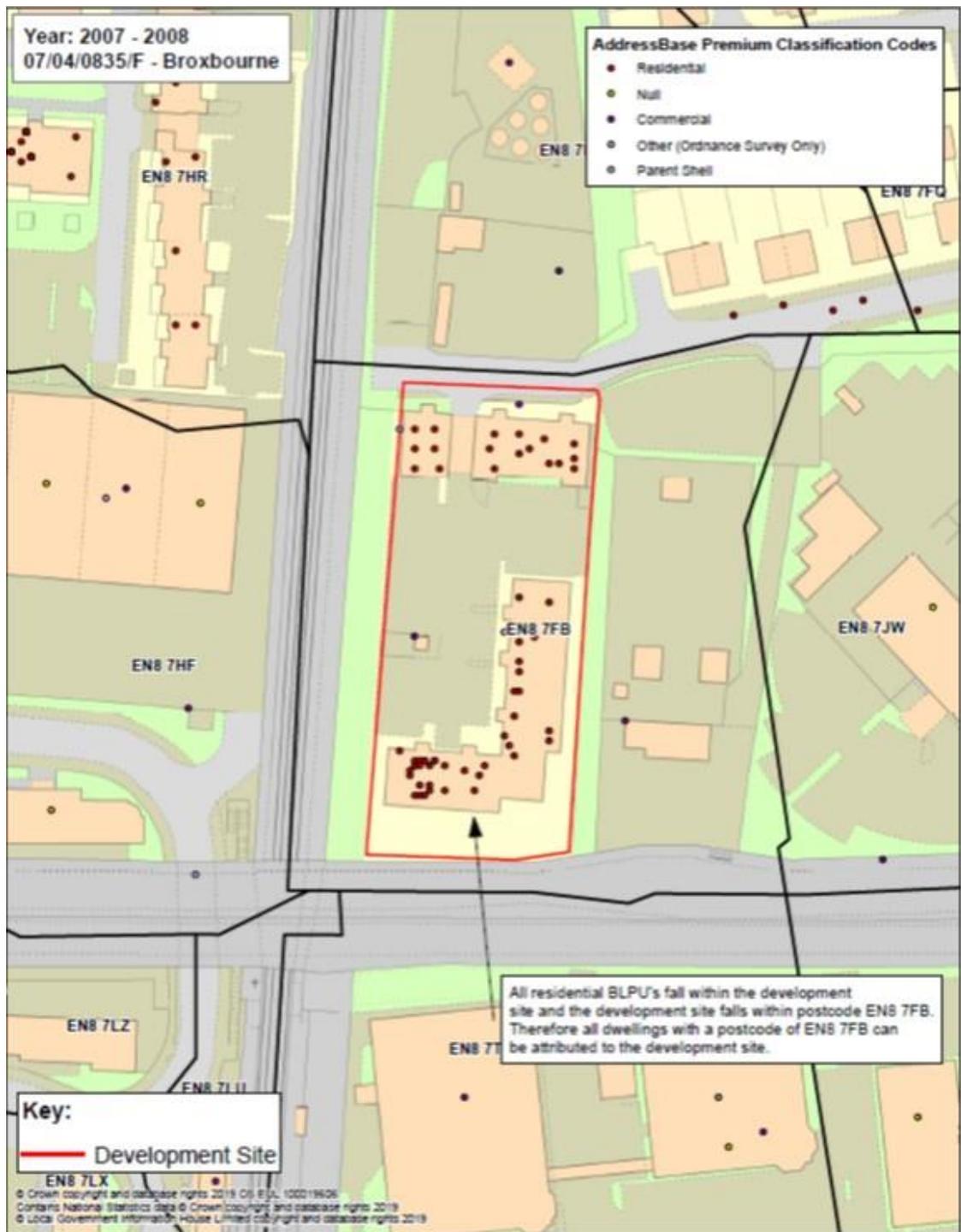


Figure 4. Scenario 1 for determining development coterminus postcodes.

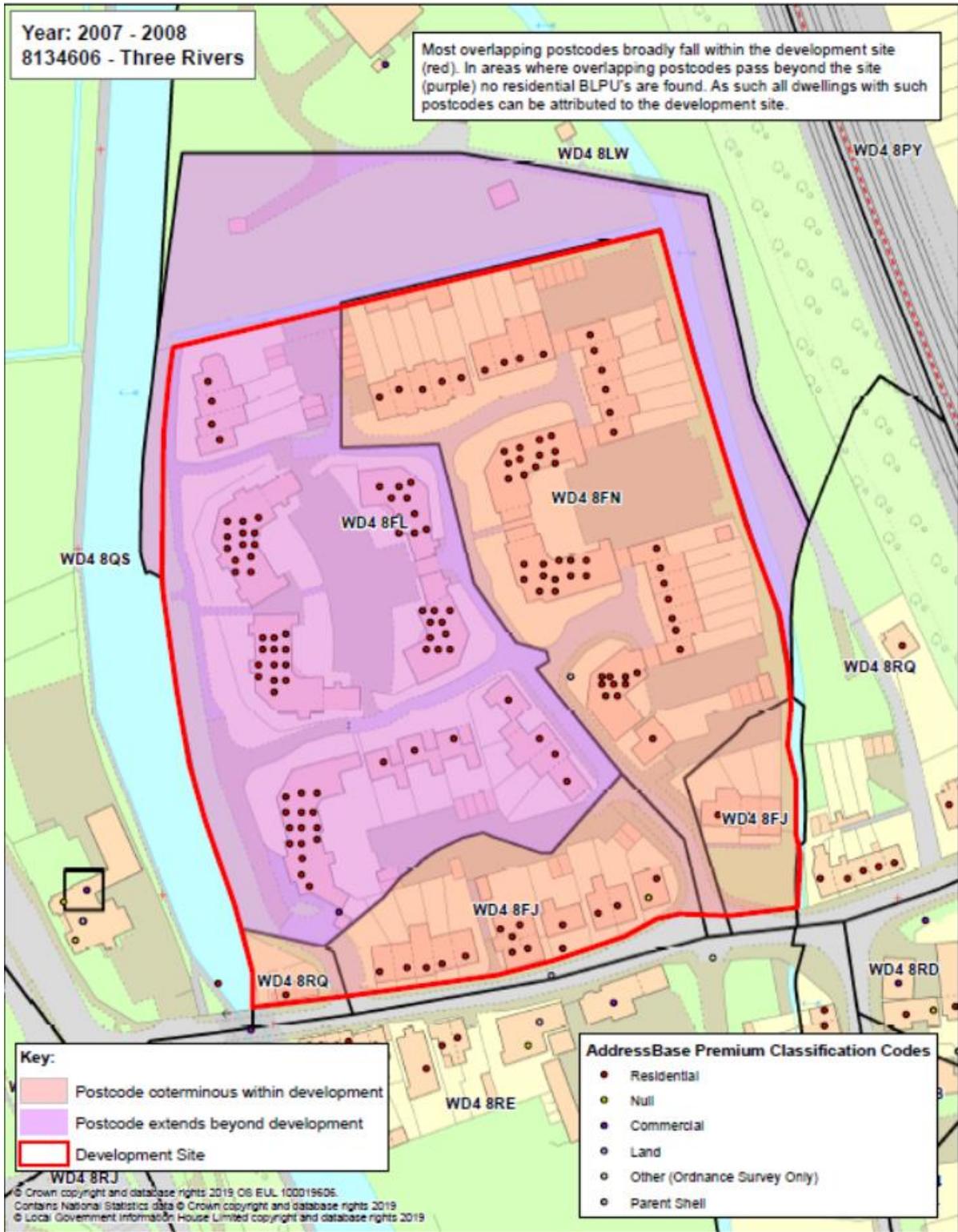


Figure 5. Scenario 2 for determining development coterminus postcodes.

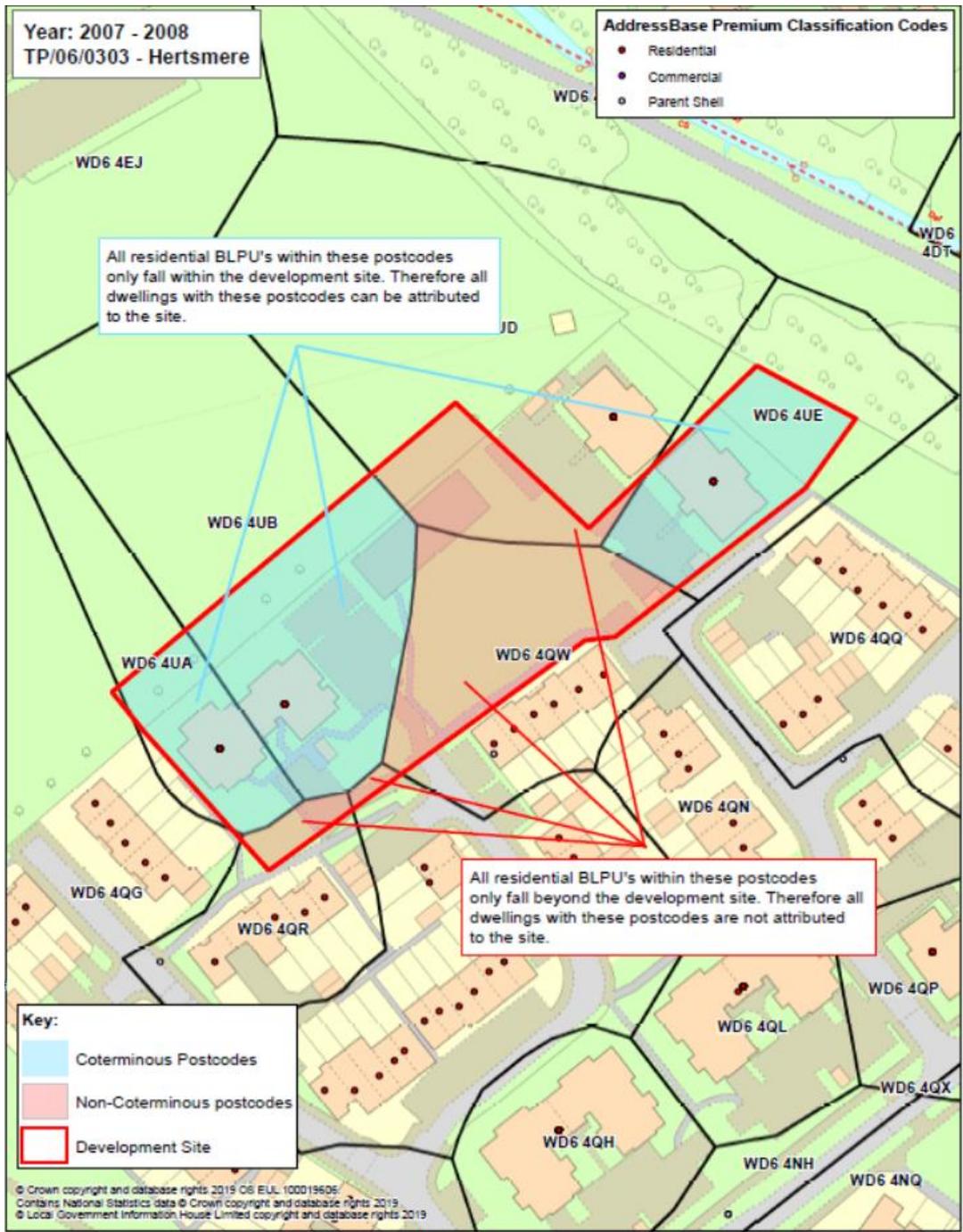


Figure 6. Scenario 3 for determining development coterminous postcodes.

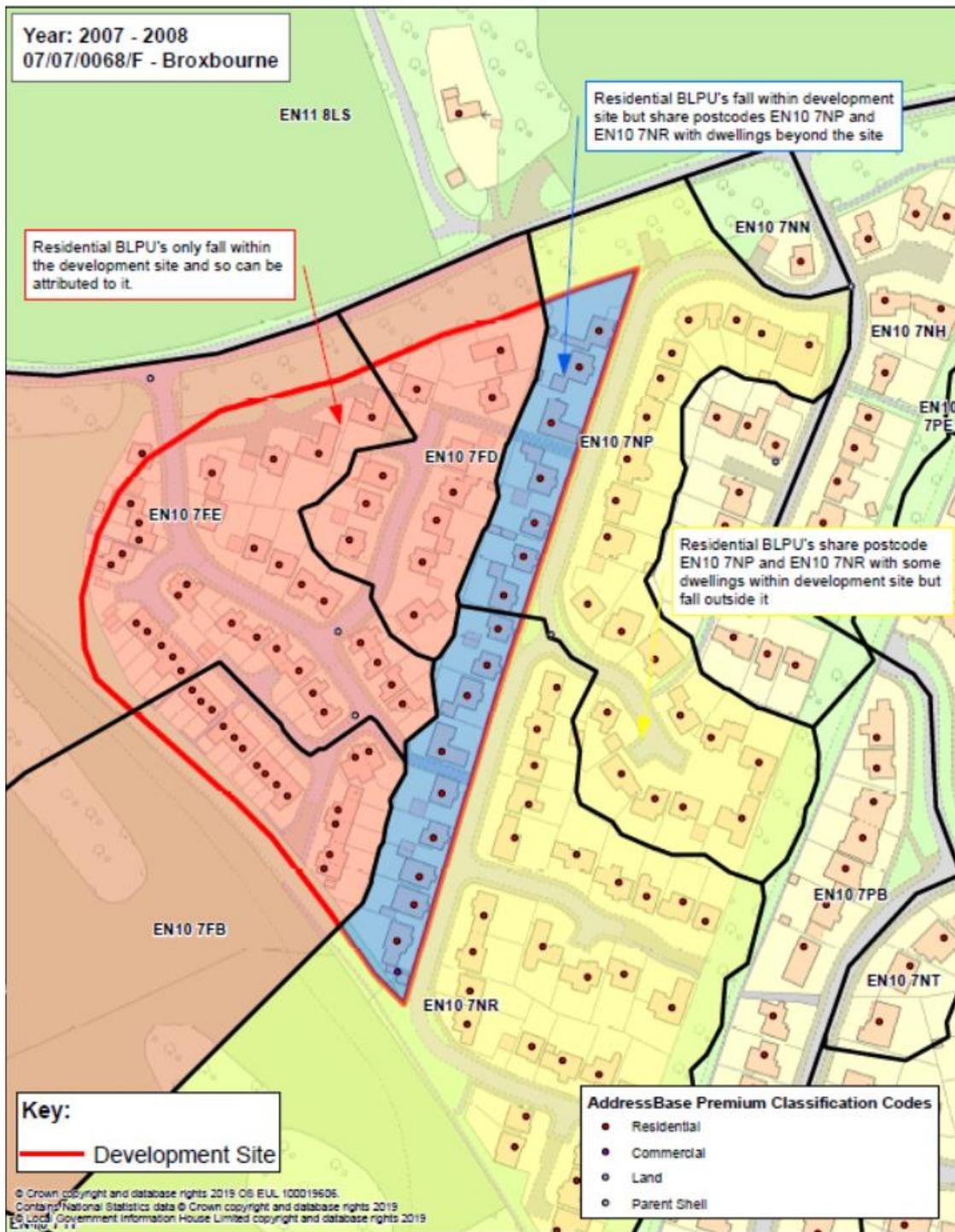


Figure 7. Scenario 4 for determining development coterminus postcodes.

The coterminus postcode files were of relevance to annual development cohorts between the periods 2002 and 2006 and, postcode level GP Registration data sets. In the former, School Census records between 2002 and 2006 required only the pupil postcode to be returned to the DfE, 2007 was the first year that individual pupil address was included as part of the return. Coterminus postcodes within developments, in conjunction with the address files, can be used to determine dwelling counts within the postcode by units only and type. School Census mainstream records associated with these postcodes can be divided by the number of dwellings to calculate yield per 100 dwellings rates. This method would be applied for coterminus postcodes within a specific development, or in aggregate for a cohort, to determine a statistically robust estimate of mainstream yield per 100 dwellings. Such “estimate” yield rates can be used to display patterns in pupil accumulation within developments, and overall annual cohorts, prior to the address specific counts associated with a whole development from 2007 onwards.

A similar premise exists for postcode-based GP registrations counts for children aged 0 to <7 years by individual year of age. Aggregation of coterminus postcodes within an annual cohort of developments permits a statistically robust sample of the included new build population for that year at County level. Individually addresses and associated residential dwelling types from AddressBase Premium allows the count of units only for calculation of rates per 100 dwellings. Where postcodes are wholly houses, or wholly flats, then this permits the estimate of yield per 100 dwellings specific to these dwelling types. Whilst this is included in the overall PYS methodology this element has yet to be progressed, in the majority, in the analytical stage (see Section 10).

8.2 Development address export files

PPREF specific address files determined by GIS processes were exported for matching to the annual cohort master files. The principle address included was usually the Delivery Point Address (DPA), this is used by Royal Mail to deliver packages. These addresses are very spatially accurate as they identify the exact location of the package destination. Until the spatiality of the DPA is concretely determined, a Geographic Address can be used, Local Authorities use these when organising addresses. Geographic Addresses use a combination of Primary Addressable Objects (PAO's) and Secondary Addressable Objects (SAO's) to provide either a preliminary address or, a description of an address. Generally, UPRN's with PAO's are more accurate than UPRN's with SAO's, the latter commonly describe plots of land, such as Plot 238. In most cases the Primary Addressable Object progresses to become the Delivery Point Address. Figure 8 is an extract of a permission in the 2018_2019 cohort which is still under construction.

There are no Delivery Point Addresses for the site, which is expected given the spatiality of the dwellings is not yet determined. However, all the UPRN's within the site have a PAO address such as, for example, No: X Thorpe Road, Bishops Stortford, Hertfordshire. The AddressBase Premium technical specification recommends using Delivery Point Addresses first and, if these are not available, gaps should be completed with the PAO/SAO. The trade-off however is that Geographic Addresses are less spatially authoritative as Delivery Point Addresses.

In most instances completed development polygons within the Pupil Yield Study were Delivery Point Addresses due to the greater level of spatial accuracy.

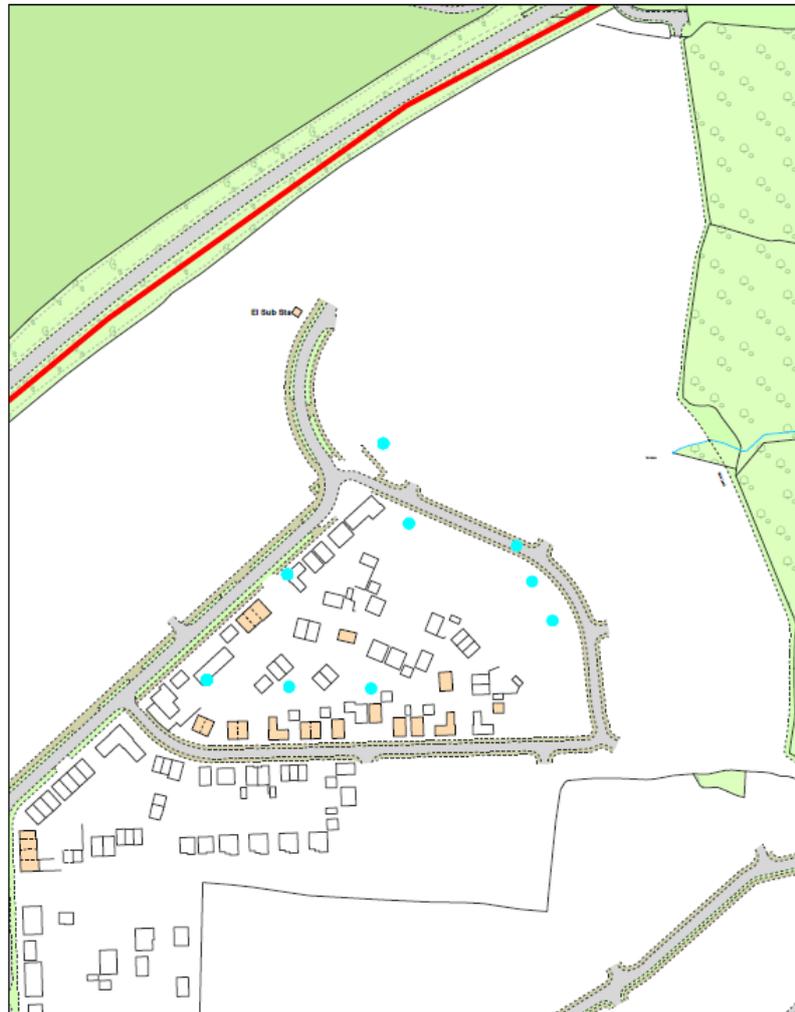


Figure 8. Example map of a development currently under construction with the level of detail in such instances displayed.

The following data fields were included in the finalised address file for each annual cohort:

- Inclusion Year – the financial year to which the PPREF relates
- LAD – Local Authority District Name
- LAD CD - Local Authority District Code (Office for National Statistics)
- PPREF – Unique Planning Permission Reference
- Unique Site Ref - The PPREF prefixed with the LAD CD
- UPRN – Unique Property Reference Number for each dwelling
- Parent UPRN – the parent UPRN for multiple dwellings such as the UPRN associated with a block of flats with each flat in the block also having its own UPRN
- Sub Building – Address data
- Building Name – Address data
- Building Number – Address data
- Thoroughfare – Address data

- Post Town – Address data
- Postcode – Address data
- Classification – RD02, RD03, RD04 & RD06 in the majority of instances
- Class Scheme - AddressBase Premium Classification Scheme
- Class Description – Detached, Semi-Detached, Terraced, Self-Contained Flat
- Primary Description - Residential
- Secondary Description - Dwelling
- Dwelling Classification Type – House_Bungalow – Detached, House_Bungalow – Semi-Detached, House_Bungalow – Terraced, Self-Contained Flat_Apartment_Maisonette.

Pivot table analysis of the address cohort classification determined dwelling counts by units only and type for each unique PPREF. These were cross referenced to the homogenous total permitted dwelling counts arising from the overall permissions, residential completions and size_type data within the cohort master file. This ensured that the GIS determined number of dwellings by type matched that of the SMART Herts data sets. Developments with variance in dwelling counts between addresses “on the ground” versus total completions were subject to further investigation. Most instances where this occurred resulted from an additional permission coming forward for a site. These additional permissions were identified through address and description field searches of the residential completions master data file 2002 through to 2020. Additional permissions were joined to the original permission and overall permission, residential completions and size_type data files merged into one record. The site unique identifier was amended to a concatenate of both permissions which served as an identifier for developments which were merged, for example, [Site 1 ID] & [Site 2 ID]. The analysis process was then repeated to ensure resulting counts tallied between GIS and SMART Herts data sets.

To the annual cohort GIS master address files, a “Concatenate Address” was produced within a single field, this was derived from completed cells within the associated address fields such as building number, thoroughfare, post town and postcode. The single field dwelling address were applied in looking up cleansed school census record addresses to return the master address file UPRN. The UPRN within both files provides a unique identifier for determining specific dwelling mainstream sector counts over time. Additional data from the GIS Address files was also cross referenced to the master data files for each annual cohort derived from the overall permissions, residential completions and size_type data files. These additional data fields were:

- ADPremium Class No: Flats – A count of flats for the unique PPREF observed within the address master file.
- ADPremium Class No: Houses - A count of houses for the unique PPREF observed within the address master file.
- ADPremium Class No: Total - A count of all dwellings (units only) for the unique PPREF observed within the address master file.
- Check ADP Total Flats to Size_Type Data – a Yes/No flag to indicate whether the GIS residential dwelling count of Flats matched the count from the size_type SMART Herts data files for the unique PPREF.

- Check ADP Total Houses to Size_Type Data – a Yes/No flag to indicate whether the GIS residential dwelling count of Houses matched the count from the size_type SMART Herts data files for the unique PPREF.
- Check ADP Total to Total Size_Type Data – a Yes/No flag to indicate whether the GIS residential dwelling count of dwelling units matched the count from the size_type SMART Herts data files for the unique PPREF.
- Development Mix – The percentage contribution of flats and houses to the overall number of units completed in the unique PPREF.
- Dominant Type – The dominant dwelling type associated with the unique PPREF. Where a percentage contribution was $\geq 60\%$ then this became the dominant type (either Houses or Flats). Where the type was within the range 40% to 60% then the dominant type was “Mixed”.

Where GIS address residential classifications matched SMART Herts size-type dwelling type counts then cross reference of the permission tenure and bed size data by type permitted, some instances the determination of individual dwelling bed size and tenure. Where this occurred the UPRN specific bed size and tenure was recorded against the master address record. This was normally the case for developments in the ≥ 10 to < 30 dwellings cohorts. For example, a development of 25 flats for which the size-type data indicates all are Open Market and 2-bed dwellings will have “2-Bed Open Market” recorded against each UPRN in the address master file. A proportion of the dwellings included within the overall Pupil Yield Study therefore already have bed size and tenure data associated with UPRNs, the remainder will be determined once all cohorts are finalised.

Finally, postcodes were extracted from the GIS annual cohort master address files and duplicates removed. The resulting list provided the annual cohort postcodes which would be applied to extract School Census records from the relevant databases since annual cohort commencement. For example, the 2007_2008 development cohort would result in individual pupil annual School Census records being extracted, based on a match between GIS master file and pupil address postcode, from 2007 through to 2020.

9.0 The schools census mainstream and special school pupil records

There are three census returns from schools each year termed the Spring, Summer and Autumn returns, the focus of the Pupil Yield Study was the January or Spring return each year 20002 to 2020. Historically this census return has been the dominant one with consideration of the Annual Schools Census and PLASC. Within state schools every pupil has an allocated Unique Pupil Number (UPN) which is retained each school year and acts as a longitudinal unique tracker across a pupils schooling, it is a mandatory field within each Schools Census return. Each Schools Census return contains pupil level data for pupils both on and off roll as at the date of the census (Nursery being the exception). Pupil Enrolment Status is however only required for those pupils whom are on roll at the school census date. A count on census day therefore includes all pupils whom are on roll as at census date and whose enrolment status is:

- ‘C’ (current - single registration at this school) [ALL schools]
- ‘M’ (current main - dual registration) [ALL schools]
- ‘S’ (current subsidiary - dual registration) [ALL schools]

- 'F' (FE college) where a pupil is registered with the PRU / AP but is taught for most of their teaching time at the FE college [For: PRU / AP only]
- 'O' (other provider) where pupil is registered with the PRU / AP but is taught for most of their teaching time by the other alternative provision provider (which is not a school) [For: PRU / AP only]

The count excludes any pupil whose enrolment status is 'G'/Guest - pupil not registered at the school but attending some sessions or lessons. It therefore follows that Pupil Date of Entry is provided for all pupils both on and off roll as at census date (on roll only for designated Nursery schools) whilst Pupil Date of Leaving will only be provided for those pupils with no enrolment status.

Anonymised child level data from all schools, with no pupil duplication from dual registration codes, as at the schools census date can therefore be extracted on the basis of the pupil UPN and a Pupil enrolment Status like 'C' or like 'M', where the Pupil Date of Leaving is 'Null'. Each annual cohort of postcodes defined in Section 7 was imported to each January school census database 2002 to 2020 to provide the reference postcode from which unique anonymised pupil data could be matched and extracted. Development postcode areas are used to refine the number of schools census records extracted for analysis, this both saves analyst time and is also in accordance with the project Information Asset Registration (IAR) entry and requirements of GDPR.

Whilst the main body of data collected via the School's Census is robust and validated with inbuilt DfE checking processes there remains a known issue with address information. A proportion of HCC schools use British Standard (BS7666) address fields within their Schools Information Management Systems (SIMS) whilst others apply free text Address field 1 through to 5. The DfE does not use address information collected via the Schools Census and therefore has no requirement for a standardised approach as to how address information is stored.

In all instances each pupil has a home address postcode however the quality of associated address field information within the remainder of each pupil's address is variable. For statistical reporting this is normally not an issue as pupil postcode is assigned to a Census Output Area (OA) based on Office for National Statistics "NSPL Postcode to OA" lookup files. These lookup files relate the centroid of a postcode area to an Output Area, OAs can then be aggregated to larger often bespoke geographies for reporting purposes and is the method recommended by the National Statistics Authority (NSA). Further information on this method is supplied in Appendix 4.

Whilst sub-postcode address quality issues have been known for several years the fact that DfE does not require this data and, the large cost of implementing a standardised address system across all schools versus other HCC priorities, suggests that this will be an ongoing issue. The query structures established within each School Census database to extract unique anonymised pupil records with their associated single row address were subsequently complex and provided in detail within Appendix 5. Resulting extract tables based on matches to annual cohort development cohort postcode records had the following formats for both mainstream and special school cohorts.

- *School Phase* – Nursery, Primary, Middle-Deemed Primary etc.
- *School No:* - The DfE allocated number for the school.
- *School Address* – The school address details including postcode.
- *NCYearActual* - The National Curriculum Year Group in which a pupil is taught for the majority of their time irrespective of their chronological age.
- *Special Educational Need* – Coded as ‘E’ (Education, Health and Care plan) or ‘K’ (SEN support) or ‘N’ (No SEN Support). The Children and Families Act 2014 replaced Statements of Educational Need (SEN statements) with ‘Education, Health and Care plans’ (EHC plans).
- *Pupil Address Type* – The pupil address is extracted based on ‘C’ or ‘Current’.
- *Home Address Postcode* - The postcode, mandatory for both BS7666 and address line format, is allocated by the post office to identify a group of postal delivery points. Note that there may be two or more current address for children with divorced/separated parents/in care, in this instance the first address is taken based on the minimum address ID.
- *BS7666 format: SAON* - The Secondary Addressable Object Name (SAON), refers to the flat, apartment name, number, or other sub-division of a dwelling.
- *BS7666 format: PAON* - The primary addressable object name (PAON), refers to the dwelling name and / or number.
- *BS7666 format: Street* - The street name / description.
- *BS7666 format: Locality* - The locality name refers to a neighbourhood, suburb, district, village, estate, settlement, or parish that may form part of a town, or stands in its own right within the context of an administrative area.
- *BS7666 format: Town* - The town name refers to: A city or town that is not an administrative area; A suburb of an administrative area that does not form part of another town or; A London district.
- *BS7666 format: Administrative area* - A geographic area that may be the highest-level local administrative area for example county or a unitary authority.
- *BS7666 format: Post town* - Assigned by the post office, based on the area sorting office.
- *Address line format: line 1* - First line of the address.
- *Address line format: line 2* - Second line of the address.
- *Address line format: line 3* - Third line of the address.
- *Address line format: line 4* - Fourth line of address.
- *Address line format: line 5* - Fifth line of the address.

With respect to Address Fields, returned information was dependent upon whether the schools Information Management System utilises BS7666 or an address line format and therefore all fields were included in order to enable geocoding. Where a child had multiple addresses, such as where a child lives with both parents at different stages of the week, the first address was extracted on the basis of the minimum Address ID. Note that where the DfE had made amendments to codes, or descriptions, since 2002 then the relevant codes were applied as current to the specific census date.

9.1 Cleansing school census address records

Data extract files from each January School Census relevant to the development annual cohort under consideration were appended to a singular data file for that cohort. Mainstream and special school data files were treated separately. A “Year” flag was added to each annual School Census data extract to relate from which census the data was obtained. For example, the 2005_2006 development cohort had a singular workbook titled “2005_2006 SC Data 2005 to 2020” within which were two worksheets “SC Mainstream Raw 2005_2006” and “SC Special Raw 2005_2006”. Within each sheet the extract table from each census was pasted with the relevant year for each census added. Following completion of the extracts for a development postcode cohort the raw data master sheets were copied to create master sheets from which address cleansing could process.

The initial step undertaken was to resolve the Address Line Format 1 through to 5 addresses into BS7666 format. This was processed through cutting the relevant Address Line fields and pasting into the relevant BS7666 fields. Generally, the number of non-BS7666 records in each annual extract is small and this process is not overly resource intensive. Following this the Address Line Format 1 through to 5 fields were deleted to reduce the number of data columns. The BS7666 Administrative Area was also deleted as all postcode extracted records were coterminus to Hertfordshire and it is therefore superfluous. At this point the master data file (for mainstream and special school pupils separately) contained the following fields:

- *School Phase* – Nursery, Primary, Middle-Deemed Primary etc.
- *School No:* - The DfE allocated number for the school.
- *School Address* – The school address details including postcode.
- *NCYearActual* - The National Curriculum Year Group in which a pupil is taught for the majority of their time irrespective of their chronological age.
- *Special Educational Need* – Coded as ‘E’ (Education, Health and Care plan) or ‘K’ (SEN support) or ‘N’ (No SEN Support). The Children and Families Act 2014 replaced Statements of Educational Need (SEN statements) with ‘Education, Health and Care plans’ (EHC plans).
- *Pupil Address Type* – The pupil address is extracted based on ‘C’ or ‘Current’.
- *Home Address Postcode* - The postcode, mandatory for both BS7666 and address line format, is allocated by the post office to identify a group of postal delivery points. Note that there may be two or more current address for children with divorced/separated parents/in care, in this instance the first address is taken based on the minimum address ID.
- *BS7666 format: SAON* - The Secondary Addressable Object Name (SAON), refers to the flat, apartment name, number, or other sub-division of a dwelling.
- *BS7666 format: PAON* - The primary addressable object name (PAON), refers to the dwelling name and / or number.
- *BS7666 format: Street* - The street name / description.
- *BS7666 format: Locality* - The locality name refers to a neighbourhood, suburb, district, village, estate, settlement, or parish that may form part of a town, or stands in its own right within the context of an administrative area.

- *BS7666 format: Town* - The town name refers to: A city or town that is not an administrative area; A suburb of an administrative area that does not form part of another town or; A London district.

Within the PYS trial school census records were extracted based on the development postcodes and a 200m buffer which were then preliminary cleansed according to the above process. These records were then sent to GIS for passing reiteratively through LocatorHub Transformation Suite, an address-matching application integrated with ArcGIS. LocatorHub cleansed the addresses and defined a Unique Property Reference Number (UPRN) for most address records. Where a specific cohort of mainstream pupils had their addresses cleansed then a combination of UPN and Postcode of a cleansed address joined to other years of records, which have a match on both the concatenate and the underlying original unclesed address, was observed to significantly speed up the address cleansing process.

Any School Census records which contained insufficient address details to geolocate was checked against any corresponding UPRN within the dataset to determine whether it is possible to harvest additional address details from other years census returns. This was required in order to achieve a sufficiently complete address to permit an address match and establish the UPRN and coordinates. Where this was not possible the pupil postcode itself was be analysed to establish if it was feasible to match either to a postcode centroid (by reference to OS Code-Point) or if the postcode is associated with a single structure, such as a block of flats, to an individual building and to a 'Parent UPRN' of that building within a development's boundary. Records that were geocoded to postcode centroid only were retained if all the delivery points were contained within a development polygon and excluded if they were not. In the latter instance it was not possible to prove a mainstream child is located within a specific development "beyond all reasonable doubt" and therefore such records should not be included. Individual pupil records which are located to a development of the basis of a building "Parent UPRN" were flagged as such although these were very small in number.

However, during the trial it was observed that there were several issues associated with this preliminary method:

- LocatorHub processing was heavily dependent on GIS resource which is finite within the organisation and substantial delays could occur.
- It was rare for an address record related to a development to occur in the 200m buffer around a permission, in such instances this related to an incorrect postcode. Removal of the buffer and associated records made no difference to observed yield rates per 100 dwellings in the development outputs nor in the calculated development average yield overall.
- A much more efficient process was not to match school census records to development addresses but rather to match exact spatially defined development addresses to school census extracts exported based on the development specific postcodes only (no buffer applied). This reduced the scale of record cleansing from the tens of thousands per cohort to thousands.

The methodology was therefore refined for development cohorts processed following the trial. The development school census data table, following removal of the

Address Line Format 1 to 5 and Administrative Area fields, was sorted according to the home postcode and Unique Pupil Number (UPN). Whilst some census returns may contain poor quality address data for a particular UPN, other years were BS7666 exact matches and could be replicated. The master address file containing the spatially exact addresses associated with the annual cohort was opened and sorted according to postcode and concatenate address. Visual cross comparison of a postcode between the school census and address master file determined the format of addresses within that area.

This format was replicated within the School Census record extracts for the specific postcode but using the relevant UPN data. For example, the master address file may list a dwelling as: Flat 5, The Dakota Complex, 4 Piggots Lane, Hemel Hempstead whilst the school census data could be: 4 Flat 5, Piggots Lane, Dakota Complex, Hemel. Effectively the School Census address extracts were cleansed to a consistent format in line with the most spatially exact DPAs within the master address files. Following this a concatenate address was produced for each school census record, this concatenate address was a unique identifier which was looked up against the cohort master address file. Where a match occurred then the Unique Property Reference Number (UPRN) from the master address file was returned against the pupil address record. Where no match occurred then the UPRN against the pupil address was labelled as “Not In Developments”. The pupil records with a returned UPRN of “Not In Developments” were visually compared to the master address records to ensure that they should be excluded.

Whilst, at face value, this process seems resource intensive it requires no training in LocatorHub, nor licence, and provides a faster turnaround in UPRN matched datasets (it is feasible to cleanse 12,000+ records a day by one person). Comparison of the applied method versus LocatorHub cleansed datasets determined no difference in the count of pupil records allocated to an example annual cohort. In some instances, the quality of address information resulting from LocatorHub cleansing was poorer than that of the method applied. This occurred as the method applied herein compares school census records to the most spatially exact and refined addresses determined from GIS analysis for the cohort of interest. A further step undertaken was to create an additional field for “Sector”. The NCYearActual text value for each pupil record was transformed to an education sector category, the values applied are shown in Table 2.

Table 2. The School Census National Curriculum Year Group Code and returned Education Sector.

<i>NC YEAR GROUP</i>	<i>EDUCATION SECTOR</i>
N1	Nursery (N1)
N2	Nursery (N2)
R	Primary
1	Primary
2	Primary
3	Primary
4	Primary
5	Primary
6	Primary

7	Secondary
8	Secondary
9	Secondary
10	Secondary
11	Secondary
12	Post-16
13	Post-16
14	Post-16
X	X

The resulting data table, for mainstream and special schools separately, provided a list of all pupils in all School Census returns since the annual development cohort under construction started producing residential completions through to 2020. However, the table includes both UPRN matched records and those which were not matched to the development cohort, it also includes singular UPNs across multiple census years. It was therefore required to create education sector counts by UPRN for each census year.

9.2 Education sector counts by development UPRN

The address cleansed and UPRN matched pupil level data table was pivoted with the following fields included:

- Year – The census year from which a group a pupil records were extracted, applied as a filter.
- UPRN – The Unique Property Reference Number, applied as a row.
- Sector – The Education Sector to which the pupil record is allocated as at the census year. This was applied as both the count and the column header.

Each year was individually selected using the filter and the resulting UPRN list with sector counts copied and pasted into a new workbook titled, for example, “2015_2016 SC Data Sector Counts 2015 to 2020”. Table 3 displays an example output for an individual census year, the specific UPRNs have been replaced however the principle is the same. Outputs were created in a standard format of N2, Primary, Secondary and, Post-16 versus UPRN. The workbook contained a separate worksheet for each school census year for which extracts were made, for example the 2015_2016 cohort had UPRN based sector counts for 2015,2016, 2017, 2018, 2019 and 2020 as separate worksheets. The process was replicated for longitudinal Special school pupil counts by sector.

Table 3. Example standard format list of UPRN versus education sector mainstream pupil counts.

UPRN	Nursery (N2)	Primary	Secondary	Post-16
A	0	1	0	0
B	0	1	0	0
C	0	1	0	1
D	0	1	0	0
E	0	2	0	0
F	2	0	0	0
G	1	1	1	0

H	0	1	0	0
I	0	1	0	0
J	0	1	1	0
K	0	1	0	1

10.0 Processing births data

The method applied herein was used within the PYS trial however it has yet to be run for the 2011 to 2018 annual development cohorts to which the births data relates. This will occur following PYS cohort finalisation and establishing the priority normalised mainstream yields associated with each annual cohort. It is included within the PYS methodology documentation to ensure that coverage is comprehensive.

Live births by financial year (2010/11, 2011/12, 2012/13, 2013/14, 2014/15, 2015/16, 2016/17 and, 2017/18) were selected using the field [DOB] Date of birth with an applied county code of usual residence of mother of child, [COUNTY_MOTHER], being Hertfordshire. The selected records had an applied “Financial Year” and “Month” identifier, for example “2012/13 April” for a live birth occurring 16th April 2012, “2017/18 Sept” for a live birth occurring 18th September 2017 and so forth. This information was used to assist in aiding the identification of completion dates for developments within the specific financial year in addition to temporal birth counts. Based on the applied selection criteria the following data fields were identified as being required for extraction, the fields were identified using the DSA between Public Health and NHS Digital:

- [ADDR_MOTHER] - Usual address of mother
- [PCODE_MOTHER] - Postcode of usual residence of mother
- [PCODE_IMP_IND] - Postcode imputation indicator
- [CNTY_DIST_MOTHER] - County district code of usual residence of mother

An aggregate count of the number of births by presence/absence of [PCODE_MOTHER] determined the percentage of births records for which postcode information was absent as a quality assurance measure for all financial years. The postcode of usual residence of mother was duplicated as an additional field and, within this duplicated field, any text spaces were removed. This field was labelled as [PCODE_MOTHER_NoSpace] and used to match to the list of development postcodes determined in Section 7. Applying the known development postcode overlays reduced the number of records which were required to be extracted from the births database. This was both in requirement of the DSA stipulation that extracts for analysis should be proportional to the scope of a project and, also informed the likely scope of this part of the project in future repeats of the process. County total numbers of live births for the financial periods were provided separately. The individual record extracts for the financial periods which were specific to the finalised development polygons included the following output fields:

- [UNIQUE ID] – A created ID which is unique for each record
- [YEAR] – Financial and either 2012 or 2013
- [MONTH] – Calendar month within which the birth occurred
- [ADDR_MOTHER] - Usual address of mother

- [PCODE_MOTHER] - Postcode of usual residence of mother
- [PCODE_IMP_IND] - Postcode imputation indicator
- [CNTY_DIST_MOTHER] - County district code of usual residence of mother

All other identifiers associated with the birth data extract were removed, data was exported to a Microsoft Excel 2010 format file, password protected and passed to the Community Intelligence & Data Science team (CIDS). The data file was both transferred and added to the restricted access project folder in accordance with protocol determined in the Data Protection Impact Assessment. The workbook password was provided separately via internal phone call. Colleagues in Public Health had informed that the births address field was a single column with no separate identifiers such as specified within BS7666 or Address Line 1-5 format, for example such as applied in the Schools Census. Addresses therefore required validation and geolocating using “Locator Hub” in order to identify the Unique Property Reference Number (UPRN) required to match to the finalised development polygon identified address UPRNs.

Following address cleansing, and addition of UPRN to the individual birth’s records, those records which were located outside of the development polygons were deleted based on linking [Unique ID] between the GIS dataset and the excel data file. Birth counts by unique development site ID were produced to examine the frequency distribution, by development size (number of dwellings) band, of aggregates for Statistical Closure Control (SDC) in accordance with the DSA. The number of births per 100 dwellings were calculated as: *The number of births in a development polygon / Total number of dwellings in a development polygon*. Frequency distributions were passed to Public Health for a determination of whether appropriate standards had been met at individual development level. The outcomes of the SDC process determined the geographical scale of the analysis of births arising from completed developments.

Following completion of the births aggregation process, and inspection by Public Health colleagues, permission was sought from the working group to delete the individual births records files both as held within GIS software and data files in the project folder. This was in accordance with procedure detailed in the DPIA.

11.0 GP Registrations data and coterminous postcodes

The method applied herein was used within the PYS trial however it has yet to be applied for the majority of the annual development cohorts 2003 to 2020. This will occur following PYS cohort finalisation and establishing the priority normalised mainstream yields associated with each annual cohort. GP Registrations data processing is included within the PYS methodology documentation to ensure that coverage is comprehensive.

The authority produces a School Place Planning Forecast, part of the data which underpins the DfE required, and accepted, forecast is GP registrations data for children aged 0 to <7 years, by individual year, by anonymised counts to postcode area. The Pupil Yield Study will cross match postcode sector counts of children aged 0 to 5 years, and individual year variants into aggregate outputs such as Age 0 to <3 years, to identified development co-terminus postcodes to produce an annual county

wide sample-based assessment of yields in the early years from new build developments. The use of this data for estimating yields from new build developments is in accordance with the entry held within the Information Asset Register.

The use of postcode small area geographies permits the determination of early years yields by new build dwelling at Units Only and Type distinction although, to date, much of this work has been suspended with prioritisation of the mainstream yields study. Further work is required to determine whether bed size and tenure distinctions can be determined dependent on the proposed DfE methodology once it is released. These assessments will be also be useful in the longer term for the accurate location of localised early years services and childcare provision. The process broadly follows that outlined below, applied to the 2002 annual development cohort.

11.1 Determination of coterminous postcodes

Development postcode buffers contain the postcodes associated with a specific permission and those which occur in a 200m range of the boundary. In creating permission specific buffers, postcode layers were superimposed over the development boundaries, where a postcode polygon intersected/overlay a boundary, or was within 200m, then the postcode was extracted. The relevant PPREF was assigned to each postcode for all developments in each annual cohort. To determine whether postcodes were wholly coterminous within development sites a combination of Codepoint Polygons and AddressBase Premium records were applied.

Using both datasets a postcode was deemed coterminous with a development site if it contained residential addresses (determined using BLPU classes within AddressBase Premium) which fell within the site boundary but no residential dwellings beyond the site. Under this methodology a 'theoretical' postcode (as defined using Codepoint Polygons) which overlaps a development may go beyond the development significantly, but if there are no other residential dwellings aside from the ones within the site then it can be inferred that all addresses with such postcodes are attributable solely to that development site. Reference should be made to Section 7.1 which outlines the four possible scenarios when determining coterminous postcodes using this methodology.

Figure 9 below displays an example development specific map for a permission within the 2002_2003 annual cohort, the buffer postcodes within a 200m radius of the site are indicated. The coterminus postcode cohort for each development is a subgroup of the buffer postcodes. The coterminus postcodes determined for each development can be aggregated to form a larger, more statistically robust, cohort for all sites included within a specific annual cohort. Coterminus postcodes were more often associated with the larger development sites ≥ 30 dwellings in size, this occurred as, on average, a postcode contains 30 households, or delivery points. Small development sites are therefore most often part of a postcode area as opposed to wholly contained within the site, the exception occurring when the development is close to 30 dwellings in size or, where a postcode area is redrawn by Royal Mail.

11.2 Example of GP and mainstream coterminous postcodes data analysis

The analysis of GP, and mainstream School Census, coterminous postcodes data sets to estimate yields per 100 dwellings, by units only and type, is as outlined within Section 12. The matching of School Census sector counts to individual dwelling permits permits the extraction of per annum sector counts by postcode. GP registrations data sets are already at postcode level and counts by year group can be cross referenced to included coterminous postcodes.



Figure 9. A development within the 2002_2003 annual cohort with the postcode overlays displayed and the 200m buffer zone shown. The coterminous postcode cohort for each development is a subgroup of the buffer postcodes.

In total 27 developments were included within the 2002_2003 annual cohort for larger sites ≥ 30 dwellings in size. These permissions contained 2,317 dwellings of which the unique addresses were contained within 83 postcode areas. Nine of the developments contained no coterminus postcodes at all whilst the remaining 18 permissions had 97.5% to 100% of their included dwellings contained in such areas. In total 16 developments had 100% of their dwellings contained within coterminus postcode areas. Overall 1,599 (69%) of the dwellings built were finally contained within 52 coterminus postcode areas in consideration of Units Only. In consideration of dwelling Type, it was observed that 456 flats were contained in 13 coterminus postcodes wherein all units were flats, this represented 50.7% of the total 915 flats included within this annual cohort. Of the 1,402 houses associated with the overall cohort 730 were included in 28 coterminus postcodes wherein the sole dwelling type was houses, this represented 52.1% of the total houses count.

The proportional representation of coterminus postcode cohorts at dwelling units and dwelling type distinction was observed, in this instance, to be robust at 69%, 50.7% and 52.1% respectively. Where coterminus postcode included dwelling count representations, relative to the overall annual cohort sizes, are high then they can be used to undertake robust assessments of:

- How the overall cohort would be expected to behave at Units Only and dwelling Type distinctions for normalised yield per 100 dwellings rates for Early Years cohorts using GP Registrations datasets;
- Provide an estimate of mainstream yields within the years 2002 to 2006 based on postcode level data as individual pupil address information was not required by the DfE, within the School Census returns, until 2007 onwards.

Figure 10 displays a comparison of normalised primary mainstream yields estimated from houses only within the 2002_2003 annual cohort coterminus postcode cohort ($n = 730$), in comparison to 2007 onwards from the whole cohort individual dwelling address ($n = 1,402$). It can be observed that the co-terminus postcode data provides a robust measure of yields which would have been observed from the overall houses cohort if individual dwelling address had been included in the School Census returns 2002 through to 2006.

However, there is likely to be a limitation to this position in that the initial years associated with coterminus postcode normalised yields per 100 dwellings rates might be an under-representation of that which occurs in the overall cohort. This results from application of different trajectory annual dwelling count applied as the denominator in calculating such rates. Whilst SMART Herts data sets permit the determination of annual completions associated with each permission, or in aggregate for an overall cohort, disaggregation to postcode level is not possible. In calculating the normalised coterminus postcode rates the overall dwelling count associated with such postcodes is applied. It is likely that not all dwellings within a postcode, and certainly not all postcodes, would have been completed in an annual period until the overall development, or annual cohort, trajectory is fully completed.

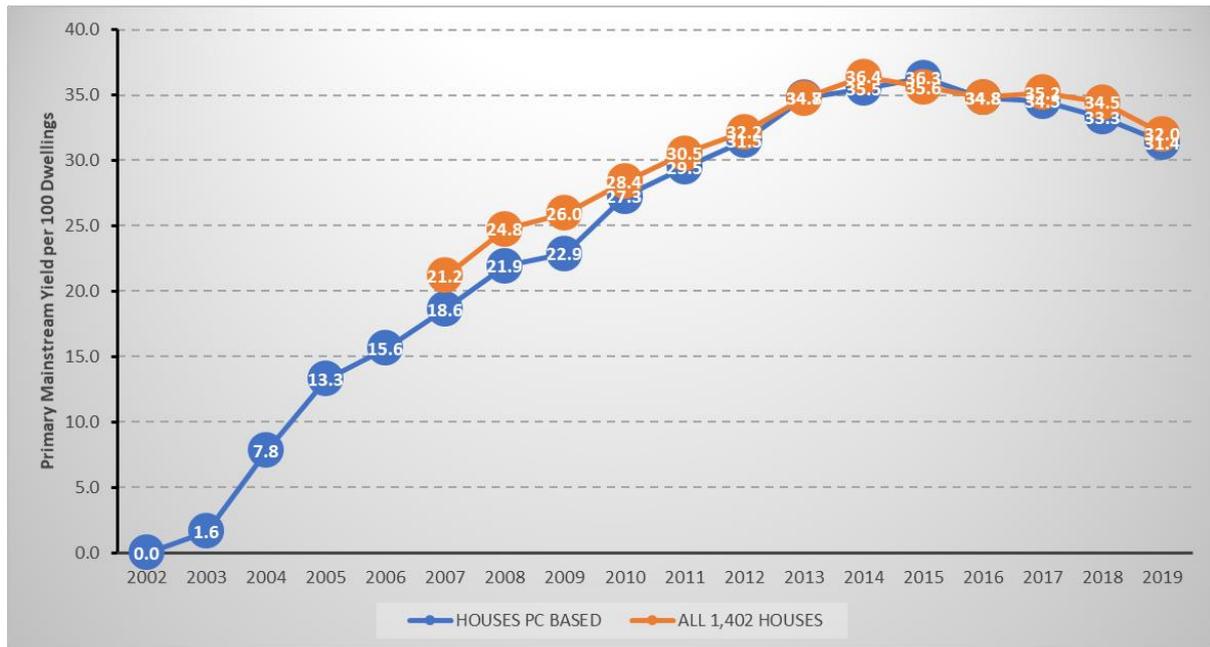


Figure 10. The mainstream primary yield per 100 dwellings for Houses Only from the 2002_2003 annual cohort based on (1) Estimates from the 730 houses within the 28 coterminus postcode areas 2002 to 2019 and, (2) All 1,402 houses from 2007 to 2019.

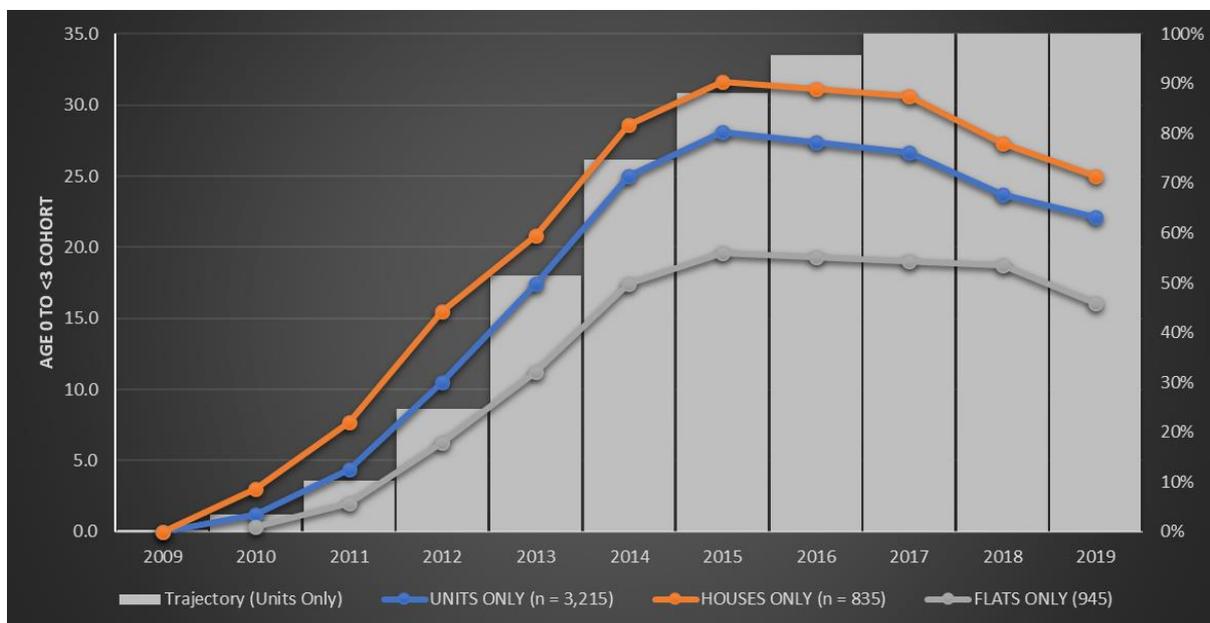
This increases the size of the denominator applied to aggregate coterminus postcode analysis resulting in smaller yield rates than would otherwise be realised if postcode level trajectory completions data were available. This will not be of relevance following the point where it is determined that the trajectory has completed, either for a single development under consideration or, for an overall annual cohort. This was investigated further using the PYS trial datasets to determine the extent of possible limitations to the method applied.

In total 4,557 dwellings were contained in the 41 developments included within the PYS trial, of these dwellings 3,215 or 70.6% were determined to be contained in coterminus postcodes. Overall 945 flats were contained in a coterminus postcode wherein this was the sole dwelling type which represented 44.6% of the trial 2,117 included flats cohort. Some 835 houses were contained in a coterminus postcode wherein this was the sole dwelling type which represented 34.2% of the trial 2,440 houses cohort. Figure 11 provides a contrast between mainstream primary Houses Only yield between the overall house's cohort and that from the coterminus postcodes only. In this consideration the 2009 start year provides individual dwelling School Census data from commencement (it being later than 2007) and permits comparison to postcode level analysis.

Figure 11. Comparison between the PYS All Houses (n = 2,440) normalised primary mainstream yield per 100 dwellings to that estimated using coterminus postcode data (houses only n = 835).



Figure 12. Age 0 to <3 years estimated yield per 100 dwellings (Units Only, Houses Only, Flats Only) using the coterminus postcode method applied to the PYS trial cohort of 41 developments.



Between 2010 and 2013 it can be observed that there are substantial differences in normalised primary yields between all houses in the cohort and those contained in only coterminus postcodes despite that latter being a large sample size. From 2014 whilst there are some differences in yields, they are broadly comparable, as is the rate of accumulation, and therefore a reliable estimate. It was determined that coterminus postcode yields generally only reflect that of the overall cohort when

approximately >85% of the total trajectory has been completed. At such a point differences in trajectory dwelling counts, applied as denominators, in coterminus postcodes versus that overall is relatively low. This was consistent with Units Only and Type distinctions level of analysis considered to date. Observed yields prior to this point should be considered indicative only.

Overall this is not of significance unless subsequent yield analysis of cohorts, particularly in the early years indicates peak yields several years prior to, or before 85%, overall trajectory completion. GP Registrations data sets were applied to the PYS trial coterminus postcode cohort to determine if this would be a limiting factor and Figure 12 displays the results at Units Only, Houses Only and, Flats Only. It can be observed that Age 0 to <3 years cohorts tend to approach peak at circa 90% of completion of the cohort trajectory (Units Only trajectory displayed in Figure 12). Values at, or around peak, were approximated for circa 3 years prior to starting the transition to LTA.

It is likely that Early Years cohort normalised yield rates at this point would be reliable estimates of the overall dwelling cohort given that most of the trajectory has completed. However, the above is without consideration of development typology and further work will be undertaken once this metric can be considered. Where it is identified that the number of dwellings, at Units Only or in Type distinctions, within coterminus postcodes is small relative to the respective total number of dwellings included in the annual cohort then estimates may not be robust. Comparison between mainstream coterminus postcode rates over the relevant period, to current time, against that derived from the overall annual cohort, will be undertaken to provide supporting evidence for closeness of match. Small population statistical sample size calculations may also be applied to determine confidence interval and confidence level associated with included coterminus postcode cohort sizes versus the overall annual cohort size. Such determinations would be applied at Units Only and Type levels of analysis.

It should be noted that the information presented herein relates to Gross Yields only with no account for local moves such as that required in order to determine net yields. Calculation of net yields will not be possible with GP Registrations aggregate postcode counts by year group as no previous and current dwelling address is provided from which this can be determined. At best, net yields within the Early Years can be estimated by applying observed local move rates from the mainstream sector as a proxy estimate.

12.0 Merging GIS/SMART Herts and school census data sets

GP Registrations and Births data sets are excluded, at current time, from compilation with the overall datasets derived from the PYS. This exclusion occurs as the former are specifically postcode area-based statistics which do not align well with UPRN based record merges and, in the latter case, this is very much an emerging position and the bulk of births data outside of the trial have yet to be sourced via Public Health. Data sets from GIS/SMART Herts and the School Census were merged to create five principle master files: (1) Master Development Cohort (2) Summary Address Outputs (3) Master Address (4) Trajectory (5) School Census UPRN Counts. These five files permitted not only the collation of development specific

information in a standard format for each annual cohort but also for all cohorts 2002 through to 2020 in entirety.

12.1 Master development cohort

This principally involved the merging of data as outlined in Section 6.2 and 6.3 using unique permission ID to create a singular row of data, in Excel, specific to developments included within the PYS or, for an annual cohort, and to which GIS permission specific dwelling counts by type were added. This singular row of planning system data per development contained the following fields:

- Report Year – the annual cohort year to which the permission related.
- LAD – Local Authority District Name.
- LAD CD - Local Authority District Code (Office for National Statistics).
- PPREF – Unique Planning Permission Reference.
- Unique Site Ref – The PPREF prefixed with the LAD CD.
- Address – the site address as recorded in the system capped at 250 characters.
- Description – a description of the site as recorded in the system capped at 250 characters.
- PDL – Previously Developed Land flag (Yes/No).
- Gross Comp in Period – the number of gross dwelling completions in the report year.
- Loss in Year – the number of dwelling losses in the report year.
- Net Comp in Period – the number of net dwelling completions in the report year.
- Total Proposed Gain Check – a formula to check the number of gross dwellings permitted in the overall permissions files versus the sum of the residential completions associated across one or more years for the development.
- Total Gross Completions – the sum of the gross residential completions observed for each specific development across one or more years specific to the PPREF.
- Match – Yes/No error function to determine whether the total proposed gain check equals the total gross residential completions data.
- C2 Development from SMART Herts Report – Yes/No flag as to whether a development was identified as C2 from the specific SMART Herts report.
- C4 Development from SMART Herts Report – Yes/No flag as to whether a development was identified as C4 from the specific SMART Herts report.
- C2 Development from Description – Yes/No flag as to whether a development was identified as C2 from the site-specific description field.
- C4 Development from Description – Yes/No flag as to whether a development was identified as C4 from the site-specific description field.
- Include/Exclude in cohort – Include/Exclude Flag wherein developments indicated as C2/C4 were excluded.
- Reason Exclude – Notes field detailing the reason a site has been excluded for future reference.
- Gross Completions in Year – The number of gross dwelling completions in the start year to which the development is assigned, and for each year onwards

until development completion. This formed the basis of the Units Only trajectory.

- Losses in Year – The number of dwellings losses in the start year to which the development is assigned, and for each year onwards until development completion.
- Net Completions in Year – The number of net dwelling completions in the start year (Gross Completions in Year – Losses in Year) to which the development is assigned, and for each year onwards until development completion.
- Actual number of dwellings – The number of dwellings associated with the specific development polygon, as per residential characteristic inclusion criteria, as determined by GIS analysis.
- Variance in Count – The difference between the Total Proposed Gain to Actual number of dwellings from GIS.
- Note on Variance – where variance in counts above is observed an indication of analysis as to why such variance may exist.
- Final Number of Dwellings – The final total number of dwellings built for the permission in consideration of the included data sets.
- ResLine Provider – The provider type for the development, or part of development to which the size_type data row relates. For example, Private, Housing Association, Local Authority, Unknown.
- Dwelling Type – House, Bungalow, Flat/Apartment/Maisonette.
- ResLine Tenure Type – Tenure of dwellings within the row of dwelling type data.
- Overall Units – Number of dwelling units associated with the tenure, dwelling type and provider row of the dwellings for all/part of the relevant permission.
- 1 Bed Units – Count of 1-bed dwelling units.
- 2 Bed Units – Count of 2-bed dwelling units.
- 3 Bed Units – Count of 3-bed dwelling units.
- 4+ Bed Units – Count of 4+ bed dwelling units.
- Overall Houses – Number of the overall number of houses completed.
- 1 Bed Houses – Count of 1-bed Houses.
- 2 Bed Houses – Count of 2-bed Houses.
- 3 Bed Houses – Count of 3-bed Houses.
- 4+ Bed Houses – Count of 4+ Houses.
- Overall Flats – Number of the overall number of Flats completed.
- 1 Bed Flats – Count of 1-bed Flats.
- 2 Bed Flats – Count of 2-bed Flats.
- 3 Bed Flats – Count of 3-bed Flats.
- 4+ Bed Flats – Count of 4+ Flats.
- ADPremium Class No: Flats – The count of residential classifications of dwelling type “Flats” as observed from AddressBase Premium for the specific polygon.
- ADPremium Class No: Houses – The count of residential classifications of dwelling type “Houses” as observed from AddressBase Premium for the specific polygon.
- ADPremium Class No: Total – The total count of residential classifications of dwelling type “Houses” and “Flats” as observed from AddressBase Premium for the specific polygon.

- Check ADP Total Flats to Permissions Completions – A flag check of whether the SMART Herts size_type permissions data for Flats type matched that of AddressBase Premium.
- Check ADP Total Houses to Permissions Completions – A flag check of whether the SMART Herts size_type permissions data for Houses type matched that of AddressBase Premium.
- Check ADP Total to Total Permissions Completions – A flag check of whether the SMART Herts size_type permissions data for Houses & Flats type matched that of AddressBase Premium.
- Development Mix – The proportional representation of Flats and Houses to the overall proposal specific mix.
- Dominant Type – The dominant dwelling type associated with the permission with the bands of $\geq 60\%$ Flats = FLATS, $\geq 40\% \leq 60\%$ Flats = MIXED, $\geq 40\% \leq 60\%$ Houses = MIXED and, $\geq 60\%$ Houses = HOUSES.

Where any flag check returned an error then further investigations were conducted to resolve discrepancies.

12.2 Summary address outputs

A single row of data per permission which summarises the information determined from GIS analysis of each development polygon using AddressBase Premium. The following fields were included:

- PPREF - Unique Planning Permission Reference.
- Total Dwellings - Based on the total number of UPRNs located to a polygon.
- Address Known – A count of dwellings for which the DPA, PAO or SAO was known – where a difference occurred to Total Dwellings then this was flagged for further investigation.
- Count Flats – A count of UPRNs wherein the residential classification was of type Flats: This data was linked into Section 11.1 above.
- Count Houses - A count of UPRNs wherein the residential classification was of type Houses sub-divided into Detached, Semi-detached, Terraced: This aggregate count was linked into Section 11.1 above.
- Other/Unknown – A count of UPRNs wherein the residential classification was RD (Residential Dwelling) but for which the specific classification for Flats/Houses was unknown.
- CHECK – A check that the count of flats and houses matched that of the total dwellings determined for the specific site polygon.
- No: Flats & No: Houses – The aggregate count of the number of flats and houses as determined from AddressBase Premium.
- Development Mix –The proportional representation of Flats and Houses to the overall polygon specific type mix: This proportion was linked into Section 11.1 above.
- Dominant Type - The dominant dwelling type associated with the permission with the bands of $\geq 60\%$ Flats = FLATS, $\geq 40\% \leq 60\%$ Flats = MIXED, $\geq 40\% \leq 60\%$ Houses = MIXED and, $\geq 60\%$ Houses = HOUSES: This was linked into Section 11.1 above.

- Status: A flag check as to whether the sub-parts of the data file equated to the total dwellings observed for a specific site polygon based on AddressBase Premium residential classification UPRN counts.

Where any flag check returned an error then further investigations were conducted to resolve discrepancies.

12.3 Master address file

This file contains the individual unit addresses by UPRN determined using GIS analysis of AddressBase Premium for each specific and unique development based on the supplied polygon, fields included were:

- Year – the annual cohort year to which the permission related.
- LAD - Local Authority District Name.
- PPREF – Unique Planning Permission Reference.
- UPRN – Unique Property Reference Number.
- Parent UPRN – The unique Parent UPRN assigned to the UPRN e.g. a block of flats would contain many unique UPRNs but all would assigned to an overall parent UPRN associated with the block.
- SubBuilding – An included AddressBase Premium address descriptor.
- BuildingName - An included AddressBase Premium address descriptor.
- BuildingNumber - An included AddressBase Premium address descriptor.
- Thoroughfare - An included AddressBase Premium address descriptor.
- PostTown - An included AddressBase Premium address descriptor.
- Postcode - An included AddressBase Premium address descriptor.
- PC_No_Space – The above postcode but with any spaces removed in order to create a specific string.
- AddressConcatenate – A concatenated address produced in standard format using the supplied AddressBase Premium address fields.
- UPRN for Matching – The UPRN associated with each unique dwelling and replicated adjacent to the AddressConcatenate field.
- Classification – The residential dwelling classification code.
- ClassScheme - AddressBase Premium Classification Scheme.
- ClassDescription – Self Contained Flat, Detached, Semi-Detached, Terraced.
- PrimaryDescription – Residential.
- SecondaryDescription – Dwelling.
- TertiaryDescription – Self Contained Flat, Detached, Semi-Detached, Terraced.
- DwellingClassificationType – “Flat: self-contained (includes maisonette apartment)”, “House_Bungalow: Detached”, “House_Bungalow: Semi-Detached”, “House_Bungalow: Terraced”.
- AggregateType – Flagged as either “FLAT” or “HOUSE”.
- NOTE – Any additional information relating to the specific unique address.

12.4 Trajectory

Trajectory at Units Only was derived from overall number of gross completions associated with each permission, over time, resulting from SMART Herts residential

completions data sets as presented in Section 11.1 above. The Units Only data was replicated into a separate, standard format, file with the following fields:

- PPREF - Unique Planning Permission Reference.
- Completions Year 1 – The year 2002.
- Completions Year 2 – The year 2003
- Completions Year X – Each subsequent year to current period.

Where a permission did not commence producing residential completions until a year after 2002 then each subsequent year, to assigned development reporting start year, had a value of N/A returned. For each subsequent year following permission completion then a value of N/A was returned. For each year which contained counts then such data related to the residential completions reported in that year only. This process was repeated for Flats Only and Houses Only as separate tables using size_type permissions files previously sourced from SMART Herts. This enabled the establishment of annual dwelling completions data sets for each permission at Units Only, House Only and, Flats Only levels of detail. Checks were made between annual aggregate Houses Only and Flats Only counts in comparison to the Units Only counts for that year to ensure unity.

Following collation of the annual completions counts for each level of detail, cumulative completions trajectories were produced in a standard format file equivalent to the above. Where a permission did not commence producing residential completions until a year after 2002 then each subsequent year, to assigned development reporting start year, had a value of N/A returned. Inclusion year completions data, i.e. year 1, replicated the values within the annual completions file. Year 2 counts were the annual completions counts plus the completions in the previous year.

For each subsequent year following development completion then the overall number of completions associated with the permission was returned to current period. This was equivalent to the value returned in the final year of the specific residential dwelling completions associated with the permission. The Units Only, Flats Only and, Houses Only cumulative completions trajectories would be applied to calculate relevant normalised yield rates per 100 dwellings over the longitudinal return of School Census record counts, matched by UPRN to new build completions, and aggregated to PPREF.

12.5 School census UPRN counts

Section 8.2 provides the method applied in determining School Census mainstream and special school pupil counts by N2, Primary, Secondary and, Post-16 to Unique Property Reference Number. The Master Address file (Section 11.3) was replicated into a separate file for N2, Primary, Secondary and, Post-16, this provided for each sector a master list of individual addresses assigned to the annual cohort included permissions. The included UPRN within the new build master address file was linked to each year of School Census cleansed addresses UPRN and per annum counts specific to each sector returned to the relevant file. This permitted the tracking of School Census pupil counts by each sector longitudinally for each specific dwelling included in the study. Pivot table analysis would permit the aggregation of counts, longitudinally, by either unique permission reference or annual cohort overall.

Associated metrics would be dwelling type, bed size and tenure either individually or in any combination thereof.

13.0 Analysing gross and net yields

The analysis of PYS based data sets was based on Units Only, Houses Only and, Flats Only as distinct entities for mainstream and special school normalised yields per 100 dwellings (N2, Primary, Secondary and Post-16) from new build developments. The current method applied relates to Gross Yields only, no discount for localised moves can be applied at this point in order to calculate Net Yields (see Section 12.2). Whilst SMART Herts datasets has enabled the determination of bed size and tenure for approximately 25% of the overall cohort, dominantly in the small development cohorts, HCC is dependent, at current point, on the future publication of the DfE methodology to ascertain such information for the remainder of the permissions.

Currently these metrics are excluded from analysis except in consideration of the overall bed size and tenure associated with both individual permissions and for annual cohorts in entirety. Normalised yields per 100 dwellings were also examined by emerging Typology classification. The two principle data sources applied in the analysis were Section 11.4 (Trajectory) and Section 11.5 (School Census UPRN Counts). The School Census UPRN Counts were subject to pivot table analysis to produce longitudinal aggregate counts by permission reference for each education sector separately, and by Units Only, Houses Only and, Flats Only (Table 4).

Table 4. An example of a Units Only listing of PPREF and the longitudinal sum of primary mainstream pupil counts observed for each permission.

<i>PPREF</i>	Primary Mainstream Pupil Counts									
	<i>201</i> <i>1</i>	<i>201</i> <i>2</i>	<i>201</i> <i>3</i>	<i>201</i> <i>4</i>	<i>201</i> <i>5</i>	<i>201</i> <i>6</i>	<i>201</i> <i>7</i>	<i>201</i> <i>8</i>	<i>201</i> <i>9</i>	<i>202</i> <i>0</i>
05/1382/FUL	0	6	23	33	42	51	50	53	46	45
07/01398/FULM	0	8	24	31	39	43	45	43	43	46
08/00485/RM	16	32	40	59	79	97	110	111	113	116
08/00746/FULM	0	0	6	12	14	16	20	20	22	23
09/00445/FULM	0	0	5	7	8	14	16	15	16	16
09/02366/1	0	0	0	5	6	12	14	13	14	14
09/0701/FUL	0	7	13	19	24	26	26	21	18	14
10/00469/FPM	0	0	0	15	19	38	52	69	61	58
10/00470/FPM	0	0	0	0	7	13	22	21	32	34
10/00472/1	0	0	0	7	9	12	13	16	16	14
10/01066/1	0	0	6	14	14	17	22	26	24	24
3/09/1061/FP	0	30	38	49	54	53	63	71	76	77

The sum of the counts, for each permission, in each year relates directly to the number of children of National Curriculum Year Group (NCYG) in that education sector as observed from that specific year's January School Census return. Counts are not cumulative additions rolled forward year on year. The total of each annual

column provides an overall sum of the number of pupils observed, in the new build dwellings included within the cohort, per annum.

The cumulative trajectory provides the count of dwellings within a permission form start date (inclusion year) to current point in time (Table 5), these are dwelling counts from which the pupil counts within Table 4 are observed to arise. Note that in examining Houses Only or Flats Only that the inclusion year (start point) may not have any dwelling counts in some permissions, this occurs where the houses, or flats, commenced construction at a point after the other dwelling type. The total of each annual column provides an overall sum of the number of cumulative completions observed, within the cohort, per annum.

Table 5. An example of the PYS trial Units Only cumulative dwelling completions over time by permission reference number (PPREF).

<i>PPREF</i>	Cumulative Dwelling Completions								
	<i>2012</i>	<i>2013</i>	<i>2014</i>	<i>2015</i>	<i>2016</i>	<i>2017</i>	<i>2018</i>	<i>2019</i>	<i>2020</i>
05/1382/FUL	130	130	130	130	130	130	130	130	130
07/01398/FUL	129	129	129	129	129	129	129	129	129
M									
08/00485/RM	250	254	280	370	386	386	386	386	386
08/00746/FUL	62	62	62	62	62	62	62	62	62
M									
09/00445/FUL	71	71	71	71	71	71	71	71	71
M									
09/02366/1		32	32	32	32	32	32	32	32
09/0701/FUL	51	51	51	51	51	51	51	51	51
10/00469/FPM	18	100	100	100	100	100	100	100	100
10/00470/FPM		17	86	88	88	88	88	88	88
10/00472/1	12	38	38	38	38	38	38	38	38
10/01066/1	59	59	59	59	59	59	59	59	59
13/0603/AOD		24	98	99	99	99	99	99	99
13/1117/AOD		50	95	123	126	126	126	126	126
3/09/1061/FP	119	147	147	147	147	147	147	147	147

For each permission dividing the annual count of mainstream pupils, for the relevant sector, by the cumulative number of dwelling completions (by type where relevant) and multiplying by 100 determines the normalised yield gross yield rate. For example, in 2020 the number of primary pupils residing in dwellings within PPREF 05/1382/FUL was 45 whilst the cumulative number of dwelling completions was 130. The normalised yield calculation proceeds as $(45/130) * 100 = 34.6$ mainstream primary pupils per 100 dwellings. An overall development cohort normalised gross yield is similarly calculated but replacing specific permission counts with overall annual development sums. For example, Figure 13 displays the accumulation of normalised mainstream primary pupils in the 2,440 houses included within the PYS

trial study using this method. The same principles apply when undertaking analysis of Typology data.

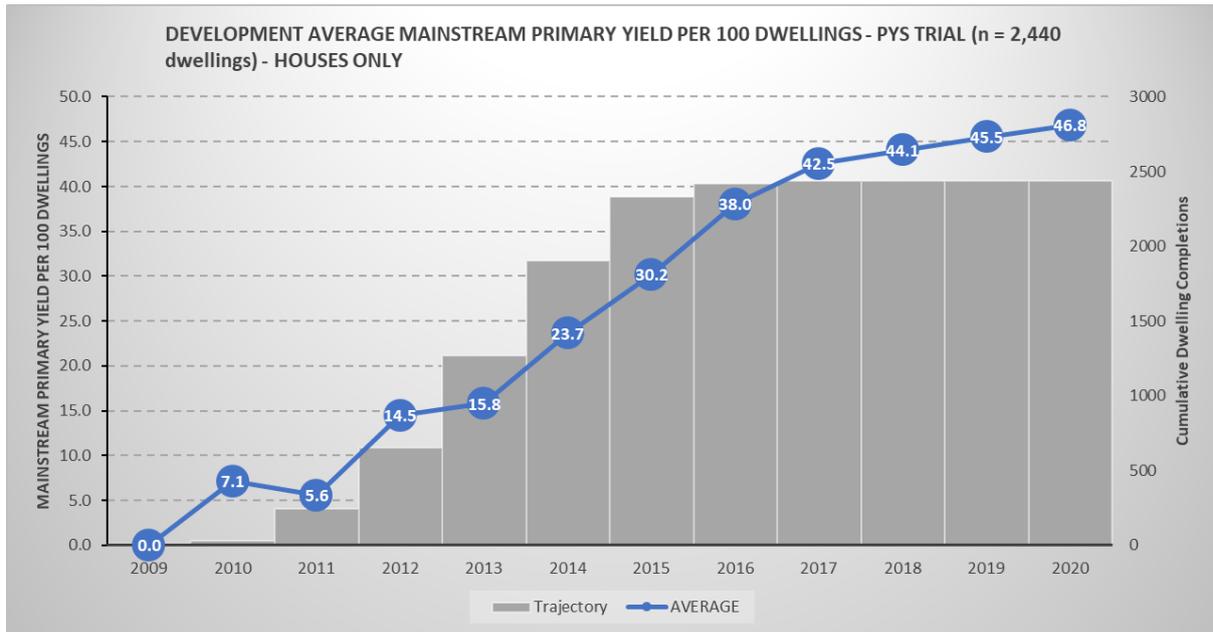


Figure 13. The accumulation of normalised mainstream pupil rates per 100 dwellings for the 2,440 houses included in the PYS trial study.

HCC has applied two calculation methods: the arithmetic mean and the weighted average.

13.1 The arithmetic means yield ad the weighted average yield

The average is a measure of central tendency, it is single value which represents the middle point in a data series such that 50% of the observations are above and 50% below. The Department for Education has indicated within its provisional documentation that summary yields across developments should be expressed as an average. However, to date no further information has been issued with respect to which average is considered the most appropriate. The following presents the two methods currently applied by HCC.

The average currently being applied by the authority is the arithmetic mean yield observed across all developments in an annual cohort, this utilises the normalised yield per 100 dwellings. It can be expressed as:

$$PY_{av_dev} = \left(\frac{\sum \left(\frac{cp_1}{dw_1} + \frac{cp_2}{dw_2} + \frac{cp_3}{dw_3} + \frac{cp_4}{dw_4} \dots \frac{cp_i}{dw_i} \right)}{N_{Dev}} \right) \cdot 100$$

Wherein PY_{av_dev} is the average development yield per 100 dwellings for all developments, cp_i is the count of pupils in development 1, 2, 3 i , dw_i is the count of dwellings in development 1, 2, 3 i and, N_{Dev} is the number of developments included in the cohort.

The following example calculation includes three developments for simplicity, developments A, B and C contain 200, 300 and 500 dwellings respectively with a current observed yield of 150, 200 and 350 primary age pupils, the average development yield (PY_{av_dev}) per 100 dwellings can be calculated as:

$$PY_{av_dev} = \left(\frac{\sum \left(\frac{cp_1}{dw_1} + \frac{cp_2}{dw_2} + \frac{cp_3}{dw_3} + \frac{cp_4}{dw_4} \dots \frac{cp_i}{dw_i} \right)}{N_{Dev}} \right) \cdot 100$$

$$PY_{av_dev} = \left(\frac{\sum \left(\frac{150}{200} + \frac{200}{300} + \frac{350}{500} \right)}{3} \right) \cdot 100$$

$$PY_{av_dev} = \left(\frac{\sum (0.75 + 0.66 + 0.70)}{3} \right) \cdot 100$$

$$PY_{av_dev} = \left(\frac{2.11}{3} \right) \cdot 100$$

$$PY_{av_dev} = (0.70333) \cdot 100$$

$$PY_{av_dev} = 70.33$$

The arithmetic mean development yield is therefore 70.3 mainstream primary pupils per 100 dwellings. In calculating the arithmetic mean yield equal weight is given to each development such that the smallest development of 200 dwellings has the same weight as the largest at 500 dwellings. In the above example the single dwelling yields from each development are reasonably close at 0.75, 0.66 and 0.70 respectively.

However, for smaller developments, the situation does exist wherein the included number of dwellings at a higher level of granularity, such as dwelling type analysis, will be small whilst the observed pupil count may be high. For example, consider development D for 20 dwellings wherein 15 are flats and 5 are houses. The development is included in the analysis as, at Units Only, the total number of dwellings is >10. Of the 15 flats 2 are Social Rented and 13 Open Market whilst for the houses 2 are Open Market and 3 Social Rented. It was observed that the flats gave rise to 6 primary mainstream pupils whilst the houses had 9 pupils. At Units Only the single dwelling yield is calculated as $15/20 = 0.75$ or 75 per 100 dwellings, the arithmetic mean yield including developments A, B and C is therefore calculated as:

$$PY_{av_dev} = \left(\frac{\sum (0.75 + 0.66 + 0.70 + 0.75)}{4} \right) \cdot 100$$

$$PY_{av_dev} = \left(\frac{2.86}{4} \right) \cdot 100$$

$$PY_{av_dev} = (0.715) \cdot 100$$

$$PY_{av_dev} = 71.5$$

The arithmetic mean yield has increased slightly to 71.5 per 100 dwellings. The following example considers Houses Only, for this dwelling type the observed single dwelling yields from developments A, B and, C are as observed previously at 0.75,

0.66 and 0.70 respectively. The single dwelling yield for development D is 9 pupils/5 dwellings = 9/5 = 1.8, the arithmetic mean is calculated as:

$$PY_{av_dev} = \left(\frac{\sum(0.75 + 0.66 + 0.70 + 1.8)}{4} \right) \cdot 100$$

$$PY_{av_dev} = \left(\frac{3.91}{4} \right) \cdot 100$$

$$PY_{av_dev} = (0.9775) \cdot 100$$

$$PY_{av_dev} = 97.8$$

The arithmetic mean across all developments has increased to 97.8 per 100 dwellings, the average has risen by 26.3 per 100 dwellings or a relative increase of 39.1% (27.5/70.3), where the houses single dwelling yield is identical to the Units Only single dwelling yield.

Development D had a small number of 5 dwellings which were houses although the single dwelling yield is high at 1.8 due to the tenure. The contribution of development D to the total 1,020 Units Only dwellings (200 + 300 + 500 + 20 = 1,020) is very small at 2.0%, if developments A, B and C were formed of 50% houses then the contribution of development D, at 5 houses, would be even smaller at <1%. However, inclusion of development D in calculating the arithmetic mean has resulted in the development average yield increasing to 97.8 per 100 dwellings, a 39.1% rise. It can be observed that the arithmetic mean is substantially affected by extreme values, this can occur to either increase or decrease the arithmetic mean of an annual cohort and it is not likely that such "extreme" values either size of the central point will balance one another.

The median is less affected by extreme or outlier values however this would only be the case where there was an equivalent number of developments ≥ 30 dwellings as those in the ≥ 10 to < 30 dwellings cohort (where extreme values tend to be observed). Observations of the extended PYS have however indicated that the latter category is at least twice the size of the former and therefore it is likely that the median will also be impacted.

An average calculation which considers each developments size relative to the total number of dwellings, commonly referred to as its *weight*, could result in a more accurate measure. This is termed the weighted average, the weight (W_i) given to any one development is the ratio of the number of dwellings (dw_i) in that development divided by the total number of dwellings in all developments (T_{dw}). This is expressed as:

$$W_i = \frac{dw_i}{T_{dw}}$$

The weights for developments A, B and C, in the above example, are therefore:

$$A) W_i = \frac{dw_i}{T_{dw}} ; W_1 = \frac{200}{1,000} ; W_1 = 0.20$$

$$B) W_i = \frac{dw_i}{T_{dw}} ; W_2 = \frac{300}{1,000} ; W_2 = 0.30$$

$$A) W_i = \frac{dw_i}{T_{dw}} ; W_3 = \frac{500}{1,000} ; W_3 = 0.50$$

As the weights are calculated relative to the total number of developments then they will sum to 1 ($0.2 + 0.3 + 0.5 = 1.0$). The weight for each development is used as a multiplier for the single dwelling yield, $\frac{cp_i}{dw_i}$, the resulting values are summed in order to determine the weighted average pupil yield (PY_w). The calculation proceeds as follows:

$$\begin{aligned}
 PY_w &= \sum \left[\left(\frac{cp_1}{dw_1} \cdot w_1 \right) + \left(\frac{cp_2}{dw_2} \cdot w_2 \right) + \left(\frac{cp_3}{dw_3} \cdot w_3 \right) \right] \\
 PY_w &= \sum \left[\left(\frac{150}{200} \cdot 0.2 \right) + \left(\frac{200}{300} \cdot 0.3 \right) + \left(\frac{350}{500} \cdot 0.5 \right) \right] \\
 PY_w &= \sum [(0.75 \cdot 0.2) + (0.66 \cdot 0.3) + (0.70 \cdot 0.5)] \\
 PY_w &= \sum [0.15 + 0.20 + 0.35] \\
 PY_w &= 0.70
 \end{aligned}$$

The mainstream primary weighted average single dwelling yield is 0.70 or 70 per 100 dwellings.

It can be proven that this equals the simpler calculation of the total number of pupils divided by the total number of dwellings, $700/1000 = 0.70$ or, 70 per 100 dwellings. In the calculations above each development pupil count is divided by the number of dwellings, the result is multiplied by the number of dwellings in that development divided by the total number of dwellings, for development A this can be expressed as:

$$\left(\frac{cp_1}{dw_1} \cdot w_1 \right) \text{ or } \left(\frac{cp_1}{dw_1} \cdot \frac{dw_1}{T_{dw}} \right)$$

This reduces to:

$$\left(\frac{cp_1 \cdot dw_1}{dw_1 \cdot T_{dw}} \right)$$

However, $dw_1/dw_1 = 1$ and can therefore be removed, for development A the residual is:

$$\frac{cp_1}{T_{dw}}$$

Repeating the process for developments B and C then:

$$PY_w = \left(\frac{cp_1}{T_{dw}} + \frac{cp_2}{T_{dw}} + \frac{cp_3}{T_{dw}} \right)$$

Wherein T_{dw} is a common denominator, such that:

$$PY_w = \left(\frac{cp_1 + cp_2 + cp_3}{T_{dw}} \right)$$

Given that the total pupil count, cp_{TOTAL} , is the sum of $cp_1 + cp_2 + cp_3$ then:

$$PY_w = \frac{cp_{TOTAL}}{T_{dw}}$$

The division of the total pupil count by the total number of dwellings is a Point Estimate (PE) of pupil yield, multiplied by 100 it is the point estimate yield per 100 dwellings. It can however be observed herein that this is the same as the weighted average yield when considering the proportional representation of each developments number of dwellings relevant to the total number of dwellings in the whole cohort. The weighted average yield of 70 per 100 dwellings in the example is marginally less than the 70.3 per 100 dwellings calculated by the arithmetic mean yield of the developments.

Incorporating development D into the calculation determines $(700 + 15) / (1,000 + 20) = 715 / 1,020 = 0.701$ or 70.1 per 100 dwellings. This can be checked using the longer form of the equation:

$$\begin{aligned} PY_w &= \sum \left[\left(\frac{cp_1}{dw_1} \cdot w_1 \right) + \left(\frac{cp_2}{dw_2} \cdot w_2 \right) + \left(\frac{cp_3}{dw_3} \cdot w_3 \right) + \left(\frac{cp_4}{dw_4} \cdot w_4 \right) \right] \\ PY_w &= \sum \left[\left(\frac{150}{200} \cdot 0.196 \right) + \left(\frac{200}{300} \cdot 0.294 \right) + \left(\frac{350}{500} \cdot 0.490 \right) + \left(\frac{15}{20} \cdot 0.020 \right) \right] \\ PY_w &= \sum [(0.75 \cdot 0.196) + (0.66 \cdot 0.294) + (0.70 \cdot 0.490) + (0.75 \cdot 0.020)] \\ PY_w &= \sum [0.14706 + 0.1961 + 0.3431 + 0.0147] \\ PY_w &= 0.700996 \\ PY_w &= 0.701 \text{ or } 70.1 \text{ per } 100 \text{ dwellings.} \end{aligned}$$

Including the fourth development, D, into the weighted average, results in a calculated value of 70.1 per 100 dwellings. Including the considerably smaller development of 20 dwellings has increased the weighted average yield by 0.1 per 100 dwellings. It can be observed that the weighted average has benefits over the arithmetic mean in determining the development average yield: it permits the inclusion of small developments wherein yield per 100 dwelling rates may be many times that observed for larger developments whilst not being excessively affected by possible outliers. It is acknowledged in literature that the arithmetic mean is the most widely understood measure of average wherein it is intuitively understood that it is the centre point of a data set.

HCC investigated whether a hybrid equation could be derived which includes elements of both the arithmetic mean and the weighted average. Such an equation would account for both the sum of the pupil counts, the contribution of each developments number of dwellings to the total dwellings included and, the number of developments included within the study. However, the hybrid approach is equally affected as that of the arithmetic mean when small developments calculated yields per 100 dwellings are disproportionately high. This occurs due to the very small ratio of the number of dwellings in developments like these relative to the total number of dwellings overall. The choice of arithmetic mean or weighted average will be dependent on DfE recommended methodology, currently HCC applies the more commonly accepted arithmetic mean.

13.2 Calculating net yields

The Study will consider whether it is appropriate to apply some form of discount to gross yields to account for localised moves which are suggested to not increase pressure on local school capacity. This will be the case for both Open Market and Affordable Rented dwellings, with a possible exception being where it can be evidenced that older dwelling stock locally vacated homes are backfilled by families with children whom go on to take up a local school place thereby exacerbating demand. The spatial extent of such areas is still under investigation and the authority cannot apply such methods to discount gross yields until further information is forthcoming.

13.3 Statistical tests for normality

Where an average value from a study is applied then it is only an accurate representation of the centre point where the distribution matches, or approximates, that of a normal distribution. The Jarque-Bera and D'Agostino are two tests, of increasing robustness, which can be applied to determine whether the observed distribution from PYS results are within bounds of the normal distribution. The former tests for skewness and kurtosis and, is generally considered as very effective. The D'Agostino tests for skewness, kurtosis and centrality and is considered more of a powerful omnibus. The Jarque-Bera is a goodness-of-fit statistical test for whether data have the skewness and kurtosis which matches that of a normal distribution. It is calculated as:

$$JB = n \left(\frac{(k_3)^2}{6} + \frac{(k_4)^2}{24} \right)$$

Wherein x is each observation, \bar{x} is the mean of all observations, n is the sample size, s is the standard deviation, k_3 is skewness and, k_4 is the kurtosis. The skewness, k_3 , is calculated as:

$$k_3 = \frac{\sum_{i=1}^n (x_i - \bar{x})^3}{ns^3}$$

The kurtosis, k_4 , is calculated as:

$$k_4 = \frac{\sum_{i=1}^n (x_i - \bar{x})^4}{ns^4} - 3$$

As this is a statistical test a hypothesis, h_0 , needs to be established. In this instance the hypothesis, h_0 , is that there was no statistically significant difference in the PYS distribution to that arising from a normal distribution. The reverse, or null hypothesis, h_n , is that there was a statistically significant difference in the observed distribution and that arising from a normal distribution. The calculated Jarque-Bera statistic was compared to the Chi-Squared distribution table to determine the critical value at a probability level (alpha or α) of 0.05. In this instance skewness and kurtosis were the variables of interest and therefore there were two degrees of freedom (df).

The D'Agostino test is based on the D statistic which provides an upper and lower critical value and is calculated as:

$$D = \frac{T}{\sqrt{n^3 SS}} \text{ And } T = \sum \left(i - \frac{n+1}{2} \right) X_i$$

Wherein D is the test statistic, SS is the sum of squares of the data, n is the sample size and, i is the order or rank of observation x . The degrees of freedom (df) for this test is the sample size n (thereby $df = n$). The data must be ordered from smallest to largest, or vice versa, prior to commencing the test. Within the PYS trial $\frac{n+1}{2} = \frac{41+1}{2} = \frac{42}{2} = 21$, therefore $T = \sum (i - 21) X_i$ which equated to 6021.4 and substituted in the equation. The test statistic D was therefore calculated as:

$$D = \frac{T}{\sqrt{n^3 SS}} \text{ or;}$$

$$D = \frac{6021.4}{\sqrt{n^3 SS}}$$

As this is a statistical test a hypothesis, h_o , was established. In this instance the hypothesis, h_o , is that there was no statistically significant difference in the observed PYS distribution to that arising from a normal distribution. The reverse, or null hypothesis, h_n , is that there was a statistically significant difference in the observed distribution and that arising from a normal distribution. If the calculated value of D fell within the critical range then h_o was accepted, otherwise h_o was rejected and h_n accepted.

13.4 SEND yields

The number of children whom are resident in the authority, attend an in-county special school and, have been UPRN matched to a new build dwelling is relatively small. Normalised yield rates per permission by education sector are therefore quite variable and do not lend themselves well to determination of average yield via arithmetic mean across an annual cohort. The determination of average yield normalised yields by education sector follows a slightly different approach to that of mainstream yields. In this instance the weighted average yield is determined per annum based on an entire annual cohort i.e. it utilises the overall count of pupils and the overall cumulative number of dwelling completions in that year. The arithmetic mean yield is then taken across all years since cohort trajectory completion to current year.

Following discussion with the DfE the authority has identified further work required in this area. Recent advice received is that those children whom attend SEND bases in mainstream schools should also be included within this cohort and HCC is moving to source this data from the January School Census returns and UPRN match to the new build dwellings. It is likely that such included counts will be small, and it will be more resource efficient to process this element once all annual cohorts have been joined into master lists 2002 through to 2020. However, this will be reviewed once a trial has been completed.

13.5 Public accessibility of results

It is the authority's intent, in the fullness of time, to release permission, annual cohort and typology level results (where relevant by dwelling type, bed size and tenure) from the longitudinal PYS where such results satisfy the requirements of Statistical Disclosure Controls. This ensures that methodology, results and conclusions drawn are within the public domain with relevant consideration of possible statutory restrictions on the release of such data. It is likely that the vehicle for access to such information would be via Herts Insight⁶ which is already a repository of information and statistics about Hertfordshire across a wide number of defined and bespoke service geographies. This platform would also permit the integration of PYS data sets with overlays of small area statistics already held and the possible creation of profile reports.

14.0 Calculating long term average (LTA) mainstream yields

The LTA is the overall yield that a development would be expected to attain once enough time has passed post-peak and reflects the wider housing stock yields, it is sometimes referred to as the "All Households" yield. The HDM inclusion of only 2011 census based All Household yields was suggested to not take account of inter-census period changes to overall dwelling stock numbers nor changes in the demographic profile of the authority area. HCC investigated methodologies by which these metrics could be updated, the first is based on official ONS population estimates/projections whilst the second is sample based.

14.1 Applying official population estimates to calculate the LTA

Within the consultation response reference was made to application of ONS Sub-National Population Projections (SNPP) cohort and SMART Herts sourced dwelling stock counts rolled forward from the 2011 census to current period. SNPP are counts for the population as a whole and not just mainstream pupils, a sector relevant countywide mainstream uptake rate would therefore need to be applied prior to calculating yield per 100 dwellings. The benefit of the SNPP is that an official projected primary age cohort can be applied for current point in time whereas the ONS Mid-Year Estimates are normally 12 to 18 months behind current time. An alternative approach is to use the most recent January School Census return refined for in-authority resident children counts.

14.2 Updating dwellings units only LTA values

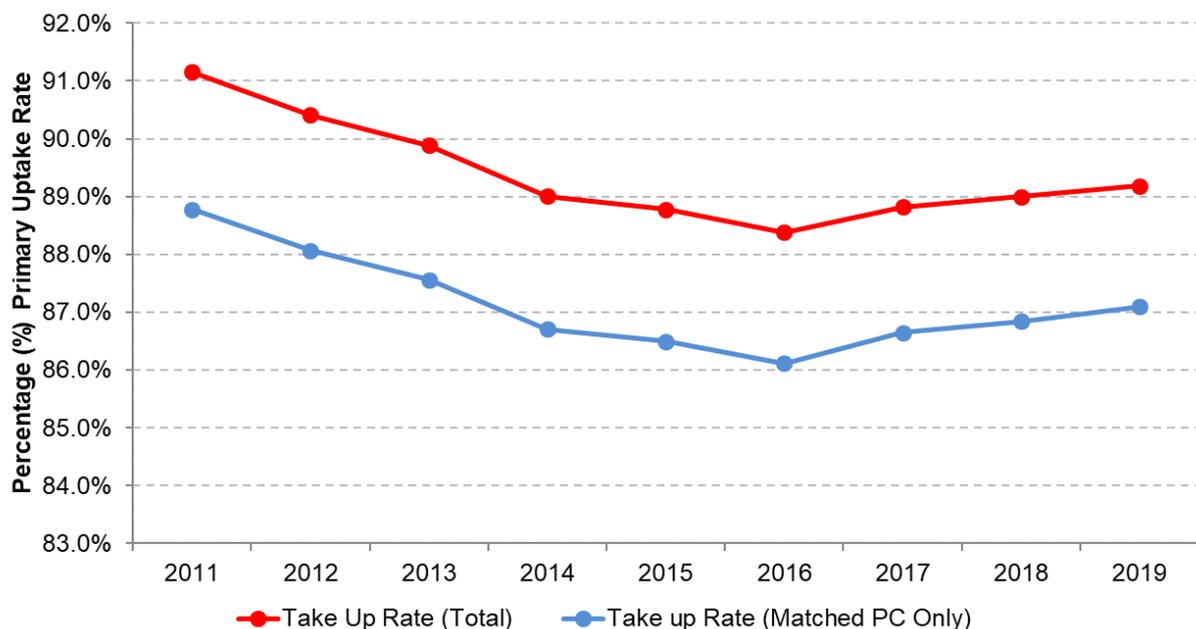
The most recent year SNPP projection for the relevant year, or ONS Mid-Year Estimate, can be used to determine an overall sector count by relevant age band. For example, the 2019 ONS MYE determines a primary age cohort within Hertfordshire of 112,190 children. Data from spatial planning estimates that as at 2019 there were 495,335 dwellings, the Units Only primary LTA value therefore becomes $112,190/495,335 = 22.6$ per 100 dwellings. However, this relates to all children of primary age and adjustment must be made to account for mainstream schools only. The current mainstream Hertfordshire resident only uptake by the

⁶ <https://www.hertfordshire.gov.uk/microsites/herts-insight/home.aspx>

primary age population was determined as 87.1%, this was the average of three methods, multiplying the yield per 100 dwelling rates by this percentage determines an updated LTA mainstream only rate. The calculation proceeds as: $22.6 * 0.871 = 19.72$ per 100 dwellings. The same principles can be applied to determine updated secondary and Post-16 rates.

The previous paragraph references “Hertfordshire resident only”, there is an important distinction between the number of primary age children whom attend an authority mainstream setting and those whom are resident in the authority itself. The January School Census return can be used to determine cohorts of mainstream children based on the same inclusion query structures as applied within the PYS. It can be observed from Figure 14 that the total take-up rate, i.e. a count of all primary age children in authority mainstream schools, is consistently 3 percentage points higher than that when considering Hertfordshire resident children only. The determination of in-authority residence can be made using the pupil home postcode in conjunction with ONS NSPL data files.

Figure 14. The percentage of Hertfordshire mainstream primary age cohorts relative to the relevant ONS Mid-Year Estimates of Primary age within the authority.



Within Figure 14 the y-axis starts at 83% as opposed to zero and trends in variance in up-take are subsequently exaggerated. Mainstream primary resident only uptake rates decreased from around 89% of the overall primary age population in 2011 to 86% in 2016. Since this point uptake has increased to 87%. In order to account for variability an average of three methods was taken: (1) most recent 3-year average weighted uptake; (2) average of percentage over period 2011 to 2019 and; (3) overall count of mainstream resident pupils 2011 to 2019 divided by the ONS MYE 2011 to 2019 aggregate mainstream primary age population. In practice little

variation exists in either method with 2019 uptake values of 86.97%, 87.15% and, 87.10% respectively.

The application of ONS MYE or ONS SNPP data sets requires use of authority School Census data sets for calculating mainstream resident specific take-up rates. It can be observed that a simpler method is to solely apply the School Census data sets to a current estimate of dwelling stock. For example, the 2019 January School Census indicates that there are 100,058 primary age pupils attending mainstream schools in Hertfordshire. Of these 2,347 were out of county, or not successfully geolocated to authority postcodes. The resulting authority resident mainstream primary age cohort was 97,711 pupils. Data from spatial planning estimates that as at 2019 there were 495,335 dwellings, the Units Only primary mainstream LTA value therefore becomes $97,711/495,335 = 19.73$ per 100 dwellings.

There is a negligible 0.01 per 100 dwelling difference to that calculated using the ONS MYE data. In both instances there is a decrease from that observed from the 2011 Census at 20.8 per 100 dwellings for overall primary cohorts. However, considering primary uptake in 2011 at 89% then the census based mainstream resident LTA would have been $20.8 * 0.89 = 18.5$ per 100 dwellings, this update effectively increases the development permanent provision costs by 1.2 pupils per 100 dwellings (19.7 – 18.5). A benefit of ONS official population estimates, such as the SNPP or Mid-Year Estimates (MYE) is that they can also be applied to update other age group LTA dwelling unit values whilst School Census data sets are relevant for ages 4 to 18 years only (excluding further education colleges at Post-16 for which the authority does not hold data).

Whilst the authority has uptake rates, over time, readily available by mainstream sector there remains a more substantial barrier to applying official population estimates. This method would be limited to dwelling units only as the SNPP does not provide population projections arising from specific dwelling types. Application of official population estimates would therefore, at face value, be an unsuitable method for LTA calculation of Houses Only and Flats Only rates. Either a divergent approach to dwelling units only versus dwelling type would need to be applied or consideration given to alternative methods of calculation which incorporates both elements.

14.3 Dwelling type LTA census output area based values

Hertfordshire County Council is segmented into 3,516 census outputs areas (OAs), it is likely that a proportion of these would consist solely of houses and some solely flats. Identification of OAs that are of a singular dwelling type permits the allocation of census-based household by bed size counts and, overall household counts. Where OAs consist wholly of unshared households then the household count is in effect the dwelling count. Extraction of current AddressBase Premium residential dwellings for these OAs, and aggregated counts of dwellings in comparison to census estimates, would determine those which have not been subject to development since 2011 and the bed size distribution is most likely as reported at that time.

Where such OAs are identified then the most recent ONS Mid-Year Estimates (MYE) to census output area could be cross referenced and aggregated, this is not

applicable to the ONS SNPP for which District is the lowest geography. This determines most recent ONS based population estimates of areas consisting of solely houses and flats for which the dwelling count and aggregate bed size are known. Multiplying the mainstream ONS MYE population count by county-wide uptake rate determines an estimate of mainstream sector yield.

Ralph (2011) indicates that where the number of aggregate OAs is ≥ 6 then the errors associated with population estimates are likely to be less than that which occurs from small area record swapping applied by the ONS under Statistical Disclosure Control (SDC) measures. Whilst OAs are relatively small in terms of households contained there is a minimum threshold of 40 households, a target of 125 households and an upper limit of 250 households (Figure 15). Where the aggregate OA count exceeds the target rate of 750 households ($6 * 125$) and 1,872 persons ($312 * 6$) then estimates are indicated by the ONS to be robust.

The population and household size target and threshold values applied to the Output Area (OA), Lower Super Output Area (LSOA) and, Middle Super Output Area (MSOA) hierarchy for 2011 (ONS November 2012).

	Population thresholds			Household thresholds		
	Lower	Target	Upper	Lower	Target	Upper
OA	100	312	626	40	125	250
LSOA	1,000	1,500	3,000	400	600	1,200
MSOA	5,000	7,500	15,000	2,000	3,000	6,000

Figure 15. The Office for National Statistics Lower, Target and Upper population and household counts by census geography (Source: Office for National Statistics).

Alternatively, as above, mainstream sector counts for the aggregate OAs can be derived from the most recent January School Census either geolocated to point in polygon or through assignment using the ONS NSPL. Division of the most recent population estimates, from either source, by the known number of dwellings by specific type in theory permits the calculation of an updated LTA yield rate related to a specific bed size mix. The match between 2011 census dwelling count and current AddressBase Premium dwelling counts ensures that no development has occurred in the OAs since the census such that new build would be excluded. The approach in detail can be observed as:

- The 3,516 total 2011 Census Output Areas were listed, and census data matched to the following fields: Total Dwellings, Total Houses, Total Flats – sub-groups required for each were counts of 1 bed, 2, bed, 3 bed and 4+ bed unshared dwellings. HMO’s and communal establishments were listed against the OAs as separate fields.
- Census table KS401EW or QS418EW provides a total count of dwellings by OA and total count of Unshared dwellings (the difference between the two

being a total count of Shared dwellings). Note that dwelling counts excludes caravans/temporary structures. Within this table are also OA aggregate counts of Household Spaces by Accommodation Type – Houses, Flats and caravans/temporary structures – no bed size data is available from these tables and these Household Space counts are for all Household Spaces and not just those with one or more usual resident. The count of Household Spaces will therefore match the OA Total Dwelling count where there are no Shared Dwellings and there are no Caravans/temporary structures.

- Census Table QS411EW (also LC4405EW) provides OA counts of “All Household Spaces With At Least One Usual Resident by Bed Size” although Accommodation Type is not an included field. These were cross referenced to the OA list.
- From this master list OAs were identified wherein the 2011 census indicates 100% Houses or 100% Flats (unshared dwellings), this cohort was further refined by excluding those OAs where counts of communal establishments or shared dwellings existed.
- The refined cohort was passed to GIS whom extracted the AddressBase Premium residential dwelling addresses and dwelling type characteristic (House or Flat) for each census area. Counts of AddressBase Premium addresses by dwelling type for each OA determined those OAs where development had occurred subsequent to the 2011 census, these were excluded from further analysis.
- The resulting OA cohort was matched to the ONS MYE 2018 most recent OA level population estimates release which enabled calculation of Units Only, Houses Only and Flats Only population sector yield per 100 dwellings for a known aggregate bed size distribution.

Applying the above criteria (Houses only in this example) there are 196 of the 3,516 Hertfordshire OAs where the Total Dwelling Count = Total Unshared Dwellings Count = Household Spaces for Accommodation Type_Houses Count. Census Table QS411EW (also LC4405EW) provides OA counts of “All Household Spaces With At Least One Usual Resident by Bed Size” although Accommodation Type is not an included field. However, the above process determined a 196 OA cohort wherein all the dwellings and unshared household spaces relate to the Accommodation Type - Houses. QS411EW provides bed size data directly applicable to the identified dwelling type of Houses. This is only true where the sum of the OA Household Spaces Bed Size data (QS411EW) matches that of the Total Household Spaces from Table KS401EW. Recall that QS411EW relates to bed size counts of Household Spaces where there are one or more usual residents only. KS401EW reports the total number of Household Spaces irrespective of whether there is a usual resident present.

At this point consideration needs to be given to the ONS MYE and what data they contain. ONS MYE are estimates of the *usually resident population* of a defined geography as at 30th June each year. The Household Spaces counts by bed size (QS411EW) relate to households with one or more usual residents. Where OA based aggregate counts between QS411EW and KS401EW differ then this occurs when either the household space is occupied by a household which does not match the inclusion criteria of usual resident or, the property is vacant. Application of OA observed aggregate counts in a yield per single dwelling calculation wherein the

population estimate is irrespective of vacant dwellings and is for the usually resident population only therefore meets criteria between both data sets. However, it could be argued that this would only be correct where it can be evidenced that the “missing” household spaces continued to be vacant or occupied by a household that did not meet the inclusion criteria for usual resident.

Overall, the above issues can be considered moot if the 196 OA cohort for Houses Only has an overall Household Spaces count (KS411EW) which is sufficiently close to the overall Household Spaces by Bed Size counts from QS411EW for the overall bed size mix to be considered representative. The Total Houses Only Household Spaces (and by inclusion criteria dwelling type of Houses Only) identified in this cohort was 24,408 (KS401EW) and there are no shared dwellings or caravans/temporary structures in any OA. QS411EW determined 23,971 Household spaces with 312 1-Bed (1.3%), 2,974 2-Bed (12.4%), 11,248 3-Bed (46.9%) and 9,437 (39.4%) 4+ Bed.

The difference in the 196 aggregated OA counts for Household Spaces – Houses Only between the data sets was 437 or 1.8% relative to the total observed in KS401EW. The converse of this is that 98.2% of the Houses Only bed size household spaces data set was included in QS411EW. The overall bed size mix can therefore be considered representative of the overall Houses Only dwellings. If it is assumed that the occurrence of household spaces not meeting the inclusion criteria for QS411EW (vacant or not a usual resident household) is equally distributed across the bed size range then estimates of the actual bed size counts can be determined by multiplying each cohort by 1.018 (101.8%). However it is more likely that the differences would be proportional to the observed bed size distributed – a count of 11,248 3-Bed household spaces in houses would experience a greater number of occurrences of non-inclusion criteria (vacant/not a usual resident household) by virtue of the size of the cohort in comparison to the overall 312 1-Bed houses. Overall there are three determinations of the Houses Only overall Bed Size mix from the census data:

- Apply the bed size mix as observed from available Household Spaces with 1 or more usual residents.
- Examine the overall percentage difference in counts between KS401EW and QS411EW for the identified OAs and assume that the percentage difference is relevant to each bed size
- Examine the count difference between KS401EW and QS411EW and proportion this difference between the bed sizes dependent on the contribution of the bed size cohort to the total overall.

In practice, the observed overall difference of 437 dwellings is sufficiently small relative to the total 24,408 cohort that even where account is taken of differences the resulting estimated percentage bed size mix matches that of the original known data. Where differences are small then the original bed size mix from QS411EW is representative of the overall cohort derived from KS401EW. Applying the criteria, that a match in count is required between KS401EW Household Spaces – Houses and QS411EW Household Spaces with at least One Usual Resident, reduces the cohort from 196 to 43 OAs.

Whilst the overall cohort sizes contained in the 43 OAs specified above is more than enough for a statistically robust sample this excludes GIS analysis to confirm that the total number of dwellings between the census date equals that of the most recently available GIS dwelling data set. Where totals equate then the census observed bed size mix is still relevant, the larger the OA cohort the smaller the errors in the estimates. Of the 43 OAs which matched between census data sets for Houses Only 16 had an exact match to total dwellings, and of residential characteristics indicating a house dwelling type only, as determined by GIS. A further 13 OAs had a match within 1 dwelling count. The exact match OAs had an ONS MYE 2019 primary count of 459 children and, the “match within 1 dwelling” a count of 351 children. The combined count of 810 primary age children equates to a yield of 22.3 per 100 houses.

Applying the Units Only take up rate of 87.1% reduces this to 19.4 per 100 houses mainstream primary yield. The validity of applying a Units Only take up rate is however questionable, there exists the strong possibility that such rates would be higher from specific house type dwellings than that from flats. A similar approach can be taken for other demographic age bands, for example the ONS MYE 2019 indicates a total population of 9,506 persons within the 29 OAs of solely house dwelling types. This equates to a yield of 2.6 persons per house from the included bed size distribution. Whilst the overall bed size mix is known in aggregate it is not possible to calculate at this point individual house bed size LTA yields.

Additional difficulty is presented when considering Flats Only as none of the 3,516 OAs within Hertfordshire are solely of this dwelling type. In considering the percentage contribution of flats to total dwelling stock there are only 19 OAs wherein the representation is $\geq 95\%$. However, as this dwelling type cannot be considered in isolation via this method then it cannot be applied to determine LTA yield values with a degree of confidence that would likely satisfy requirements of Regulation 122. Consideration of a geography smaller than OA from which aggregate counts can be derived would likely solve this issue. The above process considers census output areas only as the ONS releases MYE to this geography. However, it is equally valid for application to smaller geographies such as postcode area data sets on condition that 2011 census exists for these areas or, it can be proven that included areas specifically exclude new build developments.

14.4 Dwelling type LTA postcode-based values

Postcode areas are specifically implemented for the delivery of post by Royal Mail, whilst they contain clusters of houses (on average 30 dwellings) the boundaries associated with them are somewhat arbitrary. Postcodes are regularly created and terminated and the ONS Geoportal provides quarterly updates via the ONSPD and ONS NSPL. It is the dwellings/households contained within a postcode area, and often its population weighted centroid, which is normally of relevance as opposed to exact spatial extent. Whilst official, or experimental, population estimates are not available for these areas proxy estimates can be created based on, for example, School Census or Electoral Register data sets.

All postcodes within the ONS NSPL which are assigned to Hertfordshire were extracted into a new CSV. AddressBase Premium was used to obtain all UPRNs within Hertfordshire which have a Classification Code which was included in the PYS. The AddressBase Premium points contain the postcode of the UPRN within

the schema. A join was made between the above AddressBase Premium points and the NSPL Hertfordshire postcodes based on the postcode fields, with those UPRNs which matched therefore attributed as belonging to Hertfordshire within the NSPL. This table was then exported for pivot table analysis and comparison of the postcode aggregate proportion of dwellings by Type made to overall Hertfordshire dwelling stock applying the same methodology. Only those postcodes wherein the residential characteristic enabled determination of dwelling type for all units within the area were included.

In total 28,057 postcodes located within the boundary of Hertfordshire were initially included, in aggregate these postcodes contained 110,861 Flats and 386,744 houses (total 497,605 dwelling units). Flats represented 22.3% of the cohort and houses 77.7%. It was observed that 19,744 postcodes were wholly populated by dwellings of House residential characteristic type and consisted of 299,341 units, this represented 77.4% of the total House type dwelling stock in the authority. In total 3,085 postcodes solely contained 62,192 dwellings of Flats residential characteristic type which represented 56.1% of the total Flat type dwelling stock in the authority. Overall 81.4% of the postcodes within Hertfordshire were included within the study at this point, the postcodes contained 72.7% of the total dwelling stock.

The refined cohort of 22,289 postcodes was cross referenced to 2011 census table LC1117EW for obtaining census-based household counts. LC1117EW is for Table 1 postcode counts of 1 or more usual resident occupied household spaces as at census date 2011 and the related total household usually resident population⁷. It excludes Table 2 postcode level occupied households with 1 or more usual resident occupied household spaces and related population counts. These postcode areas straddle OA boundaries and are subsequently split with only overall count and percentage representation data presented. Both data sets exclude postcodes with unoccupied households or where there is no usual resident. As postcodes are included by GIS process only if they wholly contain residential dwellings which meet the inclusion criteria then communal establishments are excluded.

In total 1,158 of the 22,829 postcodes had no match to LC1117EW and were either OA straddling postcodes or, postcodes with no usual residents or, occupied household spaces and/or are postcode areas created or terminated since 2011. These postcodes were excluded from further analysis. Of the remaining 21,671 postcodes a cross check between the GIS dwelling counts to that of census table LC1117EW determined those areas within which development had not occurred⁸. This resulted in a final cohort of 12,954 postcodes of which 1,040 were wholly flatted and 11,914 wholly contained houses only.

In relation to wholly flatted postcodes these areas contained 14,346 units whilst the wholly houses postcodes contained 158,368 units, total included dwelling count was 172,714 units. The number of flats included for further analysis is 12.9% of total authority flatted units dwelling stock, 40.9% of all houses and, 34.7% of total units.

⁷ LC1117EW is for total population only - no other census table appears to provide age breakdown by postcode - only postcode sectors or postcode districts.

⁸ A natural extension of this would be to cross compare refined postcode lists for inclusion at Units Only and Type analysis to those postcodes observed from the PYS master address list 2002 to 2011. Postcodes should be removed wherein a match is observed as this indicates that new build occurred in the period 2002 to 2011.

Using LC1117EW it was observed that the single dwelling total population yields as at 2011 were 1.72, 2.63 and 2.55 respectively for Flats Only, Houses Only and, Units Only. This methodology results in an included dwelling count by type of such size that sample-based confidence intervals are likely to be less than 0.2% (although possibly 0.5% when considering flats only).

However, a limitation is that whilst dwelling Type yields can be determined this is not available for either bed size or tenure distinction. Once the DfE has provided guidance on how authorities can obtain individual dwelling bed size and tenure data then a natural extension of the postcode analysis will either be to:

- Examine those postcodes of singular dwelling type and singular bed size⁹ or;
- Examine individual dwelling level data of all postcodes by bed size and tenure.

Due to resource constraints the authority has yet to proceed with postcode level analysis of mainstream sector yields from the 2020 January School Census by dwelling type.

14.5 Sample based assessment of mainstream LTA yields

The final alternative approach to the estimation of LTA mainstream pupil yields is to conduct a sample from existing dwelling stock. Figure 16 references recommended sample sizes based on the population proportion displaying the characteristic of interest. Whilst the LTA for dwelling units only indicates a percentage value of circa 20 per 100 dwellings, or 20%, the PYS has demonstrated that houses can have a primary pupil yield up to, and in excess of 50 per 100 dwellings, or 50%. The 50% demarcation in sampling is the “worst case” scenario due to the presence of a higher level of uncertainty and hence the sample size required at this mid-point is the largest. Whilst the industry standard is 95% +/- 5% it would be prudent to aim for 95% +/- 2%, based on these criteria the table below indicates a sample size of 2,401 dwellings would be required.

However, experience indicates that some poor-quality School Census addresses will be impossible to geolocate to UPRN level and it was considered prudent, to retain confidence interval, that the sample size of 2,401 be increased by 10% to a total of 2,641 dwellings. The following process was then undertaken:

- All postcodes within the ONS NSPL (2019) which are assigned to Hertfordshire were extracted into a new CSV. AddressBase Premium was used to obtain all UPRNs within Hertfordshire which had a Classification Code which was included in the PYS. The AddressBase Premium points contained the postcode of the UPRN within the schema. A join was made between the AddressBase Premium points and the NSPL Hertfordshire postcodes based on the postcode fields, with those UPRNs which matched therefore attributed as belonging to Hertfordshire within the NSPL (2018). This table was then exported for pivot table analysis¹⁰.

⁹ This would be dependent on the determination of a sufficient dwelling count by dwelling type and bed size in order to have a low sample confidence interval such that results are both meaningful and applicable in application to modelling.

¹⁰ Note: OS CodePoint-Polygon cannot be used singularly as the source to identify the UPRN postcodes as flats are more likely to be found within Vertical Streets inside the Code-Point Polygon dataset which are unlikely to

Figure 1: Sample size lookup table

Population Proportion	Precision (at the 95 per cent confidence level)							
	$\pm 12\%$	$\pm 10\%$	$\pm 8\%$	$\pm 5\%$	$\pm 4\%$	$\pm 3\%$	$\pm 2\%$	$\pm 1\%$
50%	66	96	150	384	600	1,067	2,401	9,604
45% or 55%	66	95	148	380	594	1,056	2,376	9,507
40% or 60%	64	92	144	369	576	1,024	2,305	9,220
35% or 65%	60	87	136	349	546	971	2,184	8,739
30% or 70%	56	81	126	323	504	896	2,017	8,067
25% or 75%	50	72	112	288	450	800	1,800	7,203
20% or 80%	42	61	96	246	384	683	1,536	6,147
15% or 85%	34	48	76	195	306	544	1,224	4,898
10% or 90%	24	35	54	138	216	384	864	3,457
5% or 95%	12	18	28	72	114	202	456	1,824

If you are expecting non-response or a difficulty in locating your sample selections then it is prudent to over sample to ensure that the sample size achieved provides the required level of precision.

The figures in *bold and italics* denote sample sizes of less than the recommended minimum.

Figure 16. Required sample size based on the percentage representation of the characteristic of interest, level of precision and, confidence interval (Source: National Audit Office – Statistical & Technical Team – A practical Guide to Sampling).

- Fields included within the sample extract were UPRN, AddressBase Premium Residential Characteristics for Dwelling Type and, the relevant address fields: ParentUPRN, UDPRN, SubBuilding, BuildingName, BuildingNumber, Thoroughfare, PostTown and Postcode. The provided address was based on the Delivery Point Address, which is the most spatially accurate, where the DPA was missing then the PAO/SAO was provided. Each address was flagged to indicate whether it was DPA/PAO based. Pivot table analysis of the proportion of Houses and Flats in the sample was undertaken and compared to the latest known overall dwelling stock dwelling Type data – this was to ensure that the sample was representative of all dwellings overall.
- A concatenate address for each dwelling, based on the same criteria as applied in the PYS master address files, was created. Addresses were removed where it was determined as new build via either, for example the address supplied was SAO and began with a plot reference e.g. Plot 67, Glebe Street, or cross comparison to the PYS cohort determined it as such.
- Based on the address postcodes from the sample, relevant mainstream and special school pupil records were extracted from the most recent January School Census return. The pupil cohort was included on the same selection criteria as for inclusion within the PYS. Extract fields included the UPN as a

be as accurate as the AddressBase Premium dataset. Using this method only not all the NSPL Hertfordshire postcodes would be successfully merged to the OS Codepoint Polygon layer, resulting in less postcodes being identified within Hertfordshire. Given unsuccessfully matched postcodes (which are contained within the Vertical Streets dataset) tend to contain flats, this would result in a smaller number of flats than expected. The expanded methodology applied resulted in 302 additional postcodes being included which were predominantly flatted areas.

unique identifier, National Curriculum Year Group and, all relevant address fields. An additional flag was provided to determine whether the record was “Mainstream” or “Special School”.

- Pupil address records were cleansed and matched to UPRN. The dwelling sample and pupil records were then cross referenced based on UPRN and mainstream/special school counts allocated to each dwelling where matches occurred. An aggregate Units Only, Houses Only, Flats Only yield per 100 dwellings LTA for N2, Primary, Secondary, Post-16 and Special School cohorts was calculated.

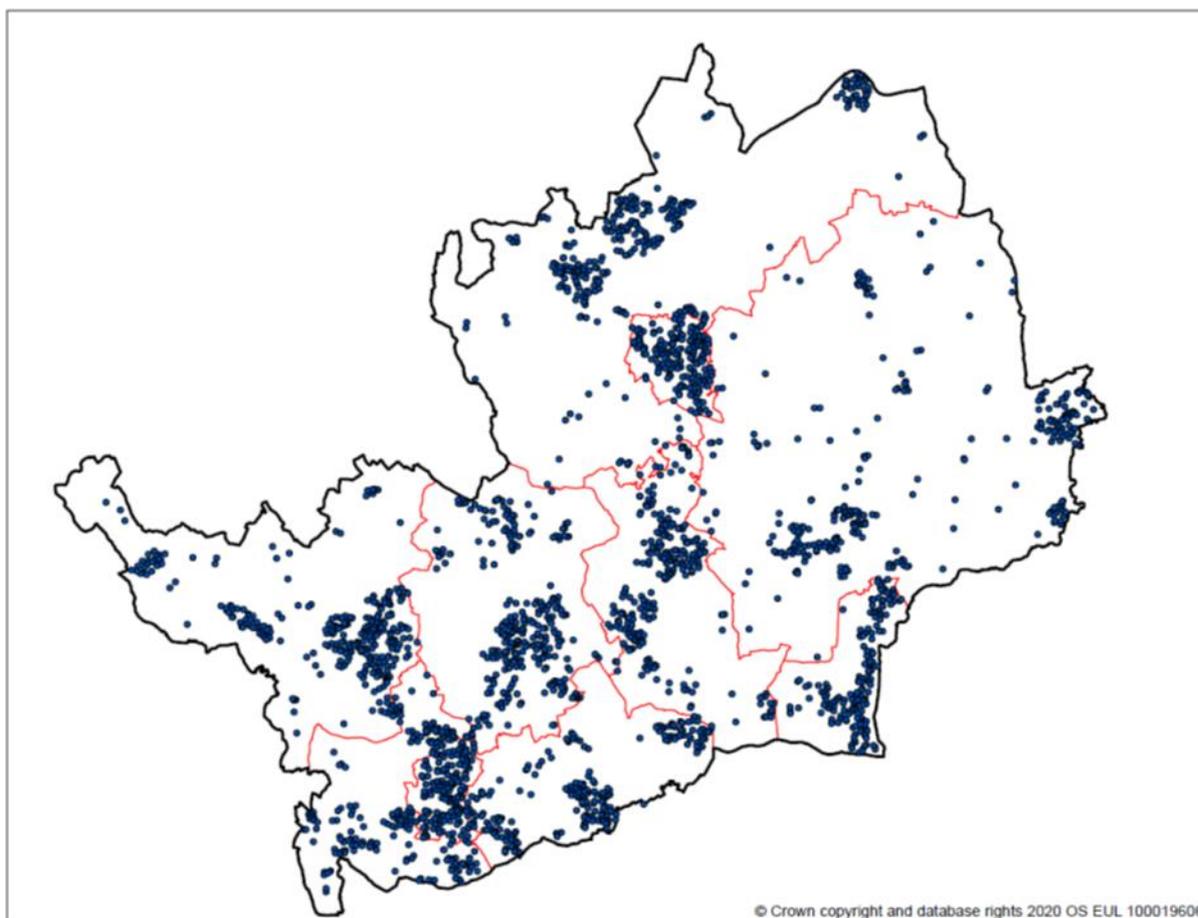


Figure 17. The location of randomly selected dwellings (n = 2,641) within the boundary of the authority based on the applied method.

Table 6. Sample derived LTA mainstream sector yields per 100 dwellings at Units Only, House Only and, Flats Only (2019).

	Dwellings	N2	PRIMARY	SECONDARY	POST-16
UNITS ONLY	2525	36	472	303	71
	Yield per 100	1.4	18.7	12.0	2.8
HOUSES	1954	30	425	286	69
	Yield per 100	1.5	21.8	14.6	3.5
FLATS	571	6	47	17	2
	Yield per 100	1.1	8.2	3.0	0.4

GIS determined that of the overall dwelling stock in the authority 77.7% were houses and 22.3% flats, the sample type mix was 77.6% houses and 22.4% flats and was considered representative of the wider population. Figure 17 displays the scatter of randomly selected dwellings within the boundary of the authority. However, of the 2,641 sample dwellings 7 were removed from the cohort as being identified as new build and a further 109 dwellings removed as the residential dwelling characteristic was "RD" and no dwelling Type distinction was available. The resulting cohort size was 2,525 dwellings. Matching to the January School Census data sets 2019 determined the LTA point estimates shown in Table 6.

As a sense check the Units Only sample observed point estimate 2019 mainstream LTA uptake was 18.7, this is 1 per 100 dwellings less than that determined using the overall authority resident mainstream primary pupil counts and the estimated total number of dwelling units. However, whilst the sample based dwelling units only yield was observed to be 18.7 per 100 dwellings the true population mean will be $\pm 2\%$ and therefore within the range 16.7 to 20.7 per 100 dwellings at primary. This encompasses the 19.7 per 100 dwellings determined previously from the overall population and is suggestive that the true population mean may lie toward the upper end of the range.

The sample determined secondary age yield per 100 dwellings (Units Only) was 12.0 (range 10 to 14), this compares to the overall population 60,688 mainstream secondary age pupils / 495,335 dwelling 2019 = 12.3 per 100 dwellings. In all mainstream sectors the LTA yield per 100 dwellings associated with Houses was higher than that for Flats although the differences were observably less for N2 cohorts. For primary, secondary and Post-16 cohorts the differences between LTA values between houses and flats were generally a factor of 3, 5 and 9.

Differences in yield are likely to have occurred due to variance in bed size mix, at Units Only between the sample and that observed applying official population estimates and overall dwelling stock numbers. Currently bed size data to specific dwelling is unknown and the authority is dependent upon DfE clarification of national approach in conjunction with the OS in order to resolve this issue. It is a further complication that this process is specific to the education sector only, there are other contributions sought from developers which require different demographic counts, such as overall population for libraries and waste disposal. Extension would therefore be required to determine availability of dwelling level data sets, such as the electoral role, which the authority can apply to robustly estimate these metrics. However, all variables resulting from sample would have a yield range within which the true population mean would lie.

Narrowing of the yield range will require a substantially larger sample size than included herein. For example, a confidence interval of 1% requires a four-fold increase in sample size from circa 2,600 to 10,000 dwellings. Further increases, or boosting, of sample sizes may be required in order to attain the confidence interval when considering specific dwelling type and bed size counts e.g. 3-bed flats which are generally low in number within the authority. It was also observed that the preliminary dwelling cohort size of 2,600 dwellings was insufficient to reliably

determine special school yields by sector. It is likely that this would be resolved through a larger dwelling cohort.

14.6 Recommended LTA methodology

The preceding examination has determined several methods by which LTA values can be annually updated, each have their strengths and weaknesses. They are all currently limited in relation to known dwelling bed size, in aggregate or individually, and for which the authority would be dependent on DfE recommendations to further resolve. Such information will be required in order to satisfy the requirements of Regulation 122. Once bed size and tenure data are available then it is apparent that the postcode method would have the greatest reliability and usefulness in updating LTA values for dwelling units and type-based analysis. In addition to having the smallest confidence intervals associated with LTA estimates the process also ties in well with the availability of postcode level GP registrations data sets for Early Years cohorts as applied within the DfE approved school place planning forecast. Further work is required on the suitability of electoral register data to create dwelling type specific adult cohort population estimates. This is likely to be a substantial piece of work and will require cross comparison to official population estimates such as the ONS MYE or SNPP to validate results within defined error bands.

15.0 Determining the typology of developments identified within the pupil yield study

Provisional DfE guidance indicates that examination of developments may determine variables which are similar such that permissions could be grouped into clusters of distinct characteristics which typify specific typologies. Distinct typologies could provide a more accurate assessment of development average yield for application to the estimation of likely mainstream yield at the Local Plan stage with consideration of Regulation 122.

Determining the typology of specific developments included within the annual cohorts of the Pupil Yield Study is an emerging methodology currently being trialed with three annual cohorts. The process is dependent upon three stages for larger proposals in the ≥ 30 dwellings cohorts. Smaller developments in the ≥ 30 dwellings cohorts, and generally all developments in the ≥ 10 to < 30 dwellings cohorts, were dependent on stages 2 and 3 only. This occurred as smaller developments were generally not included in district local plans and no relevant data would thereby be included for Stage 1 assessment.

The determination of development typology is independent of any observed pupil yield arising from a development and as such is a “blind study” based predominantly on local plan information and data as a proposal comes forward to planning application stage. Prior to conducting a typology assessment, maps specific to each development were produced by GIS and the location of the site, specific to the district within which it occurred, also identified. Whilst the method applied was to determine the typology of development retrospectively it should be noted that it could also be applied to sites in emerging Local Plans. This would provide an indication of the typology of forthcoming developments.

15.1 Stage 1: The Local Plan

The district within which larger sites, contained in an annual cohort, occurred was identified based on data already collated from the PYS master cohort data files. The annual cohort year of inclusion, for example 2009_2010, determines the year in which residential completions began to be produced by each development. This in turn provided an indication as to the Local Plan period within which each development might be found. Sites included within a Local Plan are those which have either been promoted by the District or identified within a “call for sites” and, can be included within Housing & Economic Land Area Availability (HELAA) or SHLAA documentation.

Where developments were identified as being within this documentation then District produced data relevant to these proposals was applied in determining typology. This level of analysis not only provides information relating to a specific site but also contextual data with respect to other developments within the area which may have occurred in a similar time period. Where sites are part of a wider development strategy within a local area then a more accurate assessment of typology may result due to consideration of the broader picture. Some development specific data may also be more accurate than that held elsewhere, for example the proposed dwelling density (dwellings per hectare) and the site area which, spatially, would be highly accurate.

15.2 Stage 2: Key characteristics

Key characteristics for each development are recorded without reference to pupil yield outputs, data items include:

- Number of dwelling units (note that number of dwelling units by type and bed size is unlikely to be available at this stage, this would be included in Stage 3).
- Previous land use, of which historical plans (which show the parcel of land), individual planning applications and, Google images (to 2008) can form part of the assessment. There is also a Previously Developed Land (PDL) flag within the PYS data sets.
- ONS Rural Urban Classification (RUC) determined based on assigning the development postcode areas to Census Output Areas using the ONS National Statistics Postcode Locator (NSPL), these are then looked-up against the OA based RUC.
- Housing Density based on the development number of dwelling units divided by the polygon defined site area.
- Build trajectory (provisional assessment of the likely average number of dwelling completions per annum).

This information is used to indicate a provisional typology based on objective, pre-construction stage data.

15.3 Stage 3: Post-development retrospective data

Information within Stage 3 is that derived from SMART Herts during the PYS development data gathering already undertaken prior to the typology process, the latter being the final step in the procedure. Variables determined were:

- The development bed-size mix, particularly the balance/percentage of 3+ bed size dwellings relative to 1/2-bed size dwellings.
- The dominant development dwelling type such as Houses/Flats/Mixed. Where a development is >60% Houses then the dominant type is Houses, where Flats are >60% then the dominant type is Flats, where the type mix is between 60%/40% or 40%/60% then the dominant type is Mixed.

This information may have been available from LPAs at the local plan consultation stage in more general terms. The more specific information determined as a proposal came forward for development, as included within Stage 3, was used to check whether the provisional typology from Stage 2 should be amended. Following the three-stage assessment the final determined typology was recorded against the development unique reference code (PPREF) in conjunction with all data items from each stage.

15.4 Emerging tier classifications

Initial typology classification was derived from the PYS trial cohort. This provisional assessment resulted in the methodology applied herein and the emerging classification of developments as follows:

- Tier 1, 1FE primary per 400 dwellings: *These sites are typically greenfield sites with a dominance of houses (typically 80/20), a higher proportion of 3+ bed properties, and a higher proportion of detached or semi-detached. There tends to be a housing unit density of 22 to 40 per hectare (dph).*
- Tier 2, 1FE primary per 500 dwellings: *These sites are typically PDL with a mix of houses and flats, and a higher proportion of terraced, maisonettes or flats. There is generally a 50/50 Split between smaller (1 & 2-bed) and larger (3-bed+) family homes and houses are most likely to be terraced. There tends to be a housing unit density of 40 to 60 per hectare (dph).*
- Tier 3, 1FE per 1,000 dwellings: *These sites are typically PDL with a dominance of 1-2 bed properties and are solely flatted (or at least >75% of) developments. There tends to be a housing unit density of >=60 per hectare (75 to 100 is quite common).*

The assessment of developments within the overall PYS will provide more substantive evidence to support and further refine the initial classifications and structure.

Spatial Planning do not use HELAA information but do classify permissions by their origin, where applicable, to SHLAA sites. Spatial Planning is currently in the process of collating and updating this information as an ongoing piece of work which will be completed at some point in the future. As PYS typology assessment work continues developments will be flagged if they have a SHLAA association, these records will then be cross matched to Spatial Planning datasets once their work is completed.

16.0 Limitations of the PYS methodology

There exist a few limitations in the methodology applied to determining mainstream and special school pupil yields from new build developments in the boundary of Hertfordshire County Council. The principle limitation relates to individual dwelling

bed size & tenure data whilst others relate to the transition to LTA for all sectors and data availability for Post-16 cohorts.

Whilst SMART Herts data sets have enabled the determination of overall type, bed size and tenure for each development it has not been possible to disaggregate to individual dwelling level in most instances. An exception to this was generally the smaller developments in the ≥ 10 to < 30 dwellings cohorts. Many of these smaller developments are of singular bed size and tenure and as such this could be cross referenced to the UPRN of the identified dwellings. In aggregate, it is estimated that 25% of the 50,000+ dwellings included in the study currently have specific bed size and tenure data.

The absence of individual dwelling bed size and tenure data does not prevent the determination of mainstream yield from an annual cohort of an overall known bed size and tenure mix, for either dwelling units only or by dwelling type. Such analysis is required by the DfE for determining likely average mainstream yields by development characteristics. However, it does cause substantial difficulties for modelling specific proposals, which may differ substantially to that observed from aggregate cohorts, as they come forward through the planning process.

Where proposals are substantially different to the “average” applied at Local Plan Stage then variance in yields from the norm will occur. For example, the trial PYS indicated an overall 17% contribution of Affordable Rented/Social Rented dwellings to the mix. Proposals currently coming forward within the authority may have a 40% representation of these tenures and as such yields would be anticipated to be substantially higher than “on average”. Specific site modelling based on a proposed type, bed size and tenure mix, using the Pupil Yield Study base data for a homogenous approach, is dependent on knowledge of individual bed size and tenure single dwelling average yields.

Hertfordshire County Council has approached both the ONS Census Team (for dwellings current as at the 2011 census) and HMRC to request access to individual dwelling bed size and tenure data. However, initial requests have been declined. Discussion with senior analysts in the DfE indicated that it has had similar problems in obtaining this data to individual dwelling level. The DfE implemented a project with Ordnance Survey (OS) to resolve these issues but outcomes have yet to be shared. Similarly, HCC approached GeoPlace however it became apparent that this information is not recorded within Local Land and Property Gazetteers. Review of district held council tax registers also determined that this data was not recorded against individual dwelling data by council tax band. Following discussion with the Information Commissioners Office (ICO) the authority is likely to submit a Freedom of Information (FoI) request to HMRC. Whilst it is not expected that the response will differ substantially to that initially received it is a requirement of the FoI Act that HMRC provided a detailed response as to why the data cannot be released. The ICO can then review this response, against the statutory requirements of the authority, and make a judgement as to whether access should be granted.

In relation to the transition to LTA the authority has generally observed that only those developments in the 2002 through to 2011 annual cohorts have attained peak at primary whilst, secondary peaks were only observed for developments in the 2002

to 2006 cohorts. In the latter case these developments peaked some 14 to 16 years following completion. Whilst change from peak to commencement of transition to LTA can be observed in some of the early annual cohort no singular cohort, either at primary or secondary, has been observed to attain LTA. It is likely that at least a further four years of longitudinal study will be required to observed attainment of LTA values for the earliest cohort. Consequently, LTA values applied in modelling will be of a best-estimate basis as outlined within Section 13 as opposed to “on the ground” observation from the PYS. This will also directly affect Post-16 peak and LTA values. An additional factor relating to the Post-16 cohort is that the authority can currently only include mainstream school cohorts. HCC does not have access to data returns from Further Education Colleges, these institutions return direct to the DfE.

. As a result of the current exclusion of this specific cohort then yields observed within the authority PYS at Post-16 will be less than the actual number of children resident in this age group. This will impact not only the accumulation of Post-16 cohorts to peak but also the yields at, and time at, peak in conjunction with transition to, and attainment of, LTA.

17.0 Provisional cohort sizes

In total 1,190 developments ≥ 10 dwellings in size containing 55,470 dwelling units were identified for possible inclusion in the Pupil Yield Study 2002 through to 2020. 114 developments were identified for exclusion as either being C2/C4 or, a permission reference was determined to be part of a larger permission and subsequently concatenated (Table 7).

Table 7. The combined ≥ 10 to < 30 and ≥ 30 development cohorts per annum.

<i>Annual Cohort</i>	<i>No: Devs</i>	<i>No: Dwellings</i>	<i>No: Devs Excluded</i>	<i>No: Dwellings Excluded</i>	<i>Devs in Cohort</i>	<i>Dwellings in Cohort</i>
2002_2003	70	3,138	5	148	65	2,990
2003_2004	35	1,901	4	152	31	1,749
2004_2005	75	3,969	6	247	69	3,722
2005_2006	73	3,400	8	258	65	3,142
2006_2007	76	3,288	5	317	71	2,971
2007_2008	85	2,804	2	32	83	2,772
2008_2009	75	3,258	10	171	65	3,087
2009_2010	53	3,472	2	68	51	3,404
2010_2011	44	2,075	3	33	41	2,042
2011_2012	62	3,241	6	225	56	3,016
2012_2013	50	2,024	6	262	44	1,762
2013_2014	46	1,628	6	206	40	1,422
2014_2015	57	1,904	4	171	53	1,733
2015_2016	72	3,580	6	231	66	3,349
2016_2017	77	3,065	7	174	70	2,891
2017_2018	71	3,032	8	221	63	2,811
2018_2019	90	5,868	11	632	79	5,236
2019_2020	79	3,823	15	443	64	3,380

TOTAL	1,190	55,470	114	3,991	1,076	51,479
--------------	--------------	---------------	------------	--------------	--------------	---------------

It can be provisionally indicated that the PYS will therefore include 1,076 developments containing 51,479 dwellings constructed within the boundary of the authority in the period 2002 to 2020. However, the most recent four annual cohorts have yet to be fully finalised either because: SMART Herts residential completions and size_type data sets 2020_2021 onwards will be required to complete the data sets or; there are complex sites for which estate files are being used to resolve. It is likely that the 2016_2017 and 2017_2018 developments will be fully resolved in forthcoming months whereas parts of the 2018_2019 and 2019_2020 may need to be reserved whilst most of their cohorts are processed.

18.0 References

- Hertfordshire County Council. January 2008. Planning Obligations Guidance – Toolkit for Hertfordshire: Hertfordshire County Council's requirements.
- Hollis, J. 2005. Data Management and Analysis Group – Child Yield. DMAG Briefing 2005/25 August 2005.
- Walker, J. 2006. Child Yield Estimates for School Roll Forecasting. BURISA 169, September 2006, pp. 4 – 7.
- Bath & North East Somerset. July 2009. Planning Obligations: *Supplementary Planning Document*.
- Bracknell Forest Borough Council. July 2007. Limiting the Impact of Development: Supplementary Planning Document.
- Buckinghamshire County Council. *Unknown*. Children and Young People's Service: Guidance on Planning Obligations for Education Provision.
- Burton, M. 2009. Proposed Development of Land at Dunsfold Aerodrome: Proof of Evidence – Surrey County Council.
- Cambridge County Council. 5th March 2009. Cambridge Horizons – Agenda Item No: 7 Revised Pupil Forecasts.
- Carmarthenshire County Council. 2007. Appendix 1 – Education and Children's Services Department Planning Guidance Relating to Section 106 Obligations.
- Central Bedfordshire Council. November 2009. Planning Obligations Supplementary Planning Document (SPD): Background paper – Methodology used for calculating Standard Charges and Costs. Annex 1.
- Conwy County Borough Council. 2010. Educational Facilities.
- Cumbria County Council. 2011. Development Contributions to Education Capacity and Other Related Essential Infrastructure: Draft.
- Department for Education. 2014. *Area Guidelines for Mainstream Schools: Building Bulletin 103*. Department for Education.
- Department for Education. 2017. *Local Authority Interactive Tool – User Guide*. Department for Education. September 2017. Accessed Online at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/643132/LAIT_User_Guide_2017.pdf. Accessed On: 2nd January 2019.
- EMIE / NfER 2006. Pupil Forecasting One Year On: Report of two EMIE / NfER practitioner workshops – Friday 17th November 2006.

- Essex County Council. 2010. EssexWorks: Developers' Guide to Infrastructure Contributions 2010 Edition.
- Greater London Authority (GLA). 2005. Child Yield. Data Management and Analysis Group (DMAG) Briefing 2005 / 25 – August 2005.
- Greater London Authority (GLA). 2006. Child Occupancy of New Social Housing. Data Management and Analysis Group (DMAG) Update 2006 / 11 – May 2006.
- Hampshire County Council. 2010. Building Schools for the Future – Strategy for Change: Phase 1, Havant and Horndean.
- Hampshire County Council. September 2010. Developers' Contributions towards Children's Services Facilities.
- Hollis, J. 2005. *Data Management and Analysis Group – Child Yield*. DMAG Briefing 2005/25 August 2005.
- Lancashire County Council. November 2011. Planning Obligations in Lancashire – Contributions towards education places (Appendix A).
- London Borough of Barking and Dagenham. December 2011. Draft Community Infrastructure Plan 2012 – 2025.
- Luton Borough Council. 2007. Planning Obligations – Supplementary Planning Document – September 2007.
- Milton Keynes County Council. 2008. Current Education Provision Figures (07/03/08) – Contributions Model for 2008: Addendum – Replaces Appendix 2.
- Mole Valley District Council. 2006. Surrey Planning Collaboration Project 2006- Mole Valley District Council: Planning Obligations and Infrastructure Provision Code of Practice – Basis for Calculating Formulae and Standard Charges.
- Reading Borough Council. 2004. Supplementary Planning Guidance on Planning Obligations - Education Facility Costs and Requirements.
- Reigate and Banstead Borough Council. 2008. Planning Obligations and Infrastructure – Supplementary Planning Document.
- Rockwell, J., Vargas, N., Vanis, C. and, Chou, S. 2005. Evaluation of Child Yield Within Recently Completed Housing Developments in the Borough of Brent. Worcester Polytechnic Institute.
- Surrey County Council. April 2007. Tariff and Surrey Education Formula.
- Trafford Council. February 2011. Local Development Framework: Draft SPD1: Planning Obligations. Technical Note 6: Meeting Social Needs.

Walker, J. 2006. Child Yield Estimates for School Roll Forecasting. *BURISA 169*, September 2006, pp. 4 – 7.

West Berkshire Council. May 2010. Delivering Investment from Sustainable Development: Topic Paper 3 – Education.

Wokingham Borough Council. 2010. Planning Advice Note: Infrastructure Impact Mitigation – Contributions for New Development. Revised.



Department
for Education

Securing developer contributions for education

November 2019

Contents

Summary	3
Expiry or review date	3
Who is this publication for?	3
Introduction	4
Purpose	4
Mechanisms for securing developer contributions	5
Evidence of pupil yields from housing development	7
Costs of provision	9
Identifying education projects	10
Safeguarding land for schools	11
Strategic developments and new settlements	12
Annex	16
Developer delivery of new schools	16
State Aid	17
Public contracts and OJEU procurement	18

Summary

This publication provides non-statutory guidance from the Department for Education (DfE). It has been produced to help local authorities secure developer contributions for education so that housing developers contribute to the cost of providing the new school places required due to housing growth. The guidance promotes good practice on pupil yield evidence, engagement with local planning authorities and the delivery of expanded or new schools with funding from housing development.

Expiry or review date

This guidance will be reviewed as necessary (for example, in response to changes in legislation or government policy).

Who is this publication for?

This guidance is for local authorities with a responsibility for providing sufficient school places under the Education Act 1996. It may also be a source of information for local planning authorities and other stakeholders involved in the delivery of schools.

Introduction

Government is committed to ensuring that there are enough good new school places to meet local needs, while also driving forward an ambitious housing agenda to increase housing delivery, home ownership and the creation of new garden communities. The timely provision of infrastructure with new housing is essential in meeting these objectives to secure high quality school places where and when they are needed.

DfE expects local authorities to seek developer contributions towards school places that are created to meet the need arising from housing development. You should consider the recommendations in this guidance alongside National Planning Practice Guidance on the evidence, policies and developer contributions required to support school provision.

This guidance is for local authorities with a responsibility to provide sufficient school places under the Education Act 1996. The guidance does not:

- Advise the construction/development industry on its duties or responsibilities in paying for infrastructure;
- Replace or override any aspects of other DfE publications such as guidance on [SCAP](#) and the [Admissions Code](#), or policy/guidance produced by other government departments;
- Make recommendations for individual schools or academy trusts on managing their capacity or published admission numbers;
- Propose new DfE policy on setting up new schools ([central](#) or [presumption](#) route), parental preference or the academy system.

Purpose

As a local authority with education responsibilities, you already provide evidence of education need and demand for use by planning authorities in plan- and decision-making. This guidance draws on existing good practice and is intended to help you establish a robust and consistent evidence base, underpinned by the following principles:

- Housing development should mitigate its impact on community infrastructure, including schools;
- Pupil yield factors should be based on up-to-date evidence from recent housing developments;
- Developer contributions towards new school places should provide both funding for construction and land where applicable, subject to viability assessment when strategic plans are prepared and using up-to-date cost information;
- The early delivery of new schools within strategic developments should be supported where it would not undermine the viability of the school, or of existing schools in the area.

There is great value in detailed local methodologies and guidance that explain to all stakeholders the process and reasons for the collection of developer contributions for

education in that area. This guidance is not intended to replace local approaches, which often provide detail on:

- The approach to seeking contributions for education from affordable housing.
- Types/sizes of homes that will be excluded from calculations of developer contributions.
- Education projects developer contributions may fund.
- The minimum viable size of new schools.
- Assumptions about the schools children from a development will attend, when assessing available capacity in affected schools.
- Minimum surplus capacity to allow for fluctuations in demand and parental choice, not counted as available when calculating developer contributions.
- Contributions 'in kind' (land and/or construction).
- Requirements on size and suitability of school sites, including checklists, exemplar layouts and facility specifications.
- Standard planning obligation clauses.

As local approaches to securing developer contributions for education are reviewed, they should take account of updated National Planning Practice Guidance, this guidance, and the Department's emerging national methodology for the calculation of pupil yields from housing development.

Mechanisms for securing developer contributions

1. Developer contributions for education are secured by means of conditions attached to planning permission, a planning obligation under Section 106 of The Town and Country Planning Act 1990, or the Community Infrastructure Levy (CIL). CIL revenues are intended to help fund the supporting infrastructure needed to address the cumulative impact of development across a local authority area. CIL can be used to fund the provision, improvement, replacement, operation or maintenance of a wide range of infrastructure, including education. Alternatively, a Section 106 planning obligation secures a contribution directly payable to the local authority for education (or direct provision of a school 'in kind'), though a planning obligation must comply with the following tests set out in the CIL Regulations¹, requiring it to be:

- Necessary to make the development acceptable in planning terms
- Directly related to the development
- Fairly and reasonably related in scale and kind to the development

2. The CIL Regulations (as amended in September 2019) no longer impose a 'pooling restriction' on the use of planning obligations to fund the same type of infrastructure or infrastructure project, and an infrastructure project may receive funding

¹ Regulation 122 of [The Community Infrastructure Levy Regulations 2010](#).

from both CIL and Section 106. We advise you to work with local planning authorities in devising their approaches to securing developer contributions, to consider the most appropriate mechanism (Section 106 planning obligations and/or CIL) to secure contributions from developers towards education alongside other infrastructure funding priorities. Also, when CIL charging schedules are prepared, this engagement with local planning authorities should ensure that school developments are among those D1 uses that are viability tested. A nil rate can be applied if the viability evidence indicates this is appropriate. Local planning authorities should be made aware of the considerable public investment in community infrastructure that a school represents.

3. It is important that the impacts of development are adequately mitigated, requiring an understanding of:

- The education needs arising from development, based on an up-to-date pupil yield factor;
- The capacity of existing schools that will serve development, taking account of pupil migration across planning areas and local authority boundaries;
- Available sources of funding to increase capacity where required; and
- The extent to which developer contributions are required and the degree of certainty that these will be secured at the appropriate time.

4. The local authority providing children's services is not always the charging authority for the purposes of collecting and distributing CIL. Effective on-going communication between teams responsible for planning and education is essential to ensure that education needs and costs are factored into decisions about policy requirements and delivery mechanisms. In two-tier areas where education and planning responsibilities are not held within the same local authority, planning obligations may be the most effective mechanism for securing developer contributions for education, subject to the tests outlined in paragraph 1. The use of planning obligations where there is a demonstrable link between the development and its education requirements can provide certainty over the amount and timing of the funding you need to deliver sufficient school places. We recommend that planning obligations allow enough time for developer contributions to be spent (often this is 10 years, or no time limit is specified).

5. Central government basic need grant, the DfE free schools programme and other capital funding do not negate housing developers' responsibility to mitigate the impact of their development on education. When the DfE free schools programme is delivering a new school for a development, we expect the developer to make an appropriate contribution to the cost of the project, allowing DfE to secure the school site on a peppercorn basis and make use of developer contributions towards construction. National Planning Practice Guidance explains how local planning authorities should account for development viability when planning for schools within housing developments, including an initial assumption that both land and construction costs will

be provided.² Given that basic need allocations do not explicitly factor in funding for land acquisition, it is particularly important that education land required within larger development sites is provided at no cost to the local authority wherever possible, and pooled developer contributions (Section 106 and/or CIL) are secured for the purchase of standalone sites for new schools.

6. While basic need funding can be used for new school places that are required due to housing development, we would expect this to be the minimum amount necessary to maintain development viability, having taken into account all infrastructure requirements. Where you have a reasonable expectation of developer funding being received for certain school places,³ and you have declared this in your SCAP return (or plan to do so), then basic need funding should not be considered available for those school places other than as forward funding to be reimbursed by developer contributions later.

7. There are other options besides basic need grant for forward-funding school places, including the use of local authority borrowing powers where necessary. Where new schools or school expansion is necessary to mitigate the impacts of development, and those new facilities are to be forward funded (for example by local authorities borrowing money to fund school development prior to receiving Section 106 monies or by using capital reserves), it may be possible to secure developer contributions to recoup the monies spent, including interest, fees and expenses as well as the principal sum spent. Where this model is envisaged, we recommend that you engage with the local planning authority before forward funding occurs to ensure that the local planning authority supports this approach. The CIL Regulations prohibit borrowing against future CIL receipts, so this method of forward-funding only applies to planning obligations. Local authorities can bid for funding under government grant programmes such as the Housing Infrastructure Fund (HIF) as they become available, while developers delivering schools directly as an 'in kind' contribution may be eligible for loan funding from DfE or Homes England, allowing a new school to be delivered at an earlier stage in the development than would have been possible otherwise.⁴

Evidence of pupil yields from housing development

8. Pupil yield factors should be based on up-to-date evidence from recent local housing developments, so you can forecast the education needs for each phase and type of education provision arising from new development. As well as being useful for pupil place planning across your area, pupil yield factors allow you to estimate the number of

² [National Planning Practice Guidance](#). Construction costs include ICT and furniture and equipment required for the delivery of the school.

³ In accordance with a local plan's viability assessment, policies and/or an infrastructure funding statement.

⁴ Guidance on the [Home Building Fund](#) and DfE [Developer Loans for Schools prospectus](#).

early years, school and post-16 places required as a direct result of development, underpinning the contributions agreed in planning obligations. We are working on a detailed methodology for calculating pupil yields from housing development (including assessment of available capacity in existing schools), to be published in due course. In the meantime, local approaches to calculating pupil yields remain valid.

9. While many early years settings fall within the private, voluntary and independent (PVI) sector, local authorities have a duty to ensure early years childcare provision within the terms set out in the Childcare Acts 2006 and 2016. DfE has scaled up state-funded early years places since 2010, including the introduction of funding for eligible 2 year olds and the 30 hours funded childcare offer for 3-4 year olds. The take-up has been high, increasing demand for early years provision. All new primary schools are now expected to include a nursery. Developer contributions have a role to play in helping to fund additional nursery places required as a result of housing growth, however they may be provided, in particular where these are proposed as part of school expansions or new schools.

10. You are also responsible for ensuring sufficient schools for pupils receiving primary and secondary education up to the age of 19. Furthermore, you must secure sufficient education and training provision for young people with an Education, Health and Care (EHC) plan, up to the age of 25.⁵ Pupil yield data should identify the number of students living in recent housing developments, aged 16-19 (without an EHC plan) and up to the age of 25 (with an EHC plan). We advise you to seek developer contributions for expansions required to sixth form and special educational needs and disabilities (SEN) provision, commensurate with the need arising from the development.

11. To determine the need for SEN provision, pupil yield data should identify the number of pupils/learners within recent local housing developments who attend special schools, pupil referral units or alternative provision, SEN units and resourced provision within mainstream schools. It is reasonable and fair to seek developer contributions for SEN provision in direct proportion to the needs arising from planned housing development, applying the same principle to SEN provision as to mainstream. There is no standard capacity assessment applicable to special schools and other types of non-mainstream education, as their ability to accommodate pupils depends on the specific needs of each child. However, an increase in housing will lead to an increase in SEN, and we advise you to seek developer contributions for all special school/SEN places generated by a development, where there is a need for additional SEN provision. Greater travel distances to special schools and alternative provision should not affect your

⁵ [Participation of young people: education, employment and training.](#)

consideration of whether a planning obligation meets the legal tests outlined in paragraph 1.

12. We advise you to identify a range of SEN or other non-mainstream projects and ensure that planning obligations allow you the flexibility to direct funds appropriately within a 10 year period. Non-mainstream provision does not conform to standard class sizes, these being determined according to need. While it may be appropriate to pool contributions towards a new classroom in a special school or SEN unit at a mainstream school, it is equally valid to seek contributions for school building alterations that increase a school's capacity to cater for children with SEN, such as additional space for sensory rooms, facilities to teach independent living skills or practical teaching space.

13. It is not necessary to disaggregate the SEN pupil yield factor according to different complex needs. All education contributions are based on an assessment of probability and averages, recognising that the precise mix of age groups and school choices cannot be known before a development is built. Site-specific factors will always need to be taken into account, but a robust local authority-wide pupil yield factor based on evidence of recent developments will often be sufficient to demonstrate that this need is reasonably related in scale and kind to the development.

Costs of provision

14. The amount of money that you seek to secure through developer contributions for education provision should reflect the cost of providing school places, linked to the policy requirements in an up-to-date emerging or adopted plan that has been informed by viability assessment.

15. We advise that you base the assumed cost of mainstream school places on national average costs published in the DfE school place scorecards.⁶ This allows you to differentiate between the average per pupil costs of a new school, permanent expansion or temporary expansion, ensuring developer contributions are fairly and reasonably related in scale and kind to the development. You should adjust the national average to reflect the costs in your region, using BCIS location factors.⁷ We recommend the use of index linking when developer contributions are discussed at planning application stage and in planning obligations, so that contributions are adjusted for inflation at the point they are negotiated and when payment is due.

⁶ [School places scorecards](#).

⁷ Further guidance on doing this is available with the school place scorecards (see the technical notes) for 2018 onwards.

16. Developer contributions for early years provision will usually be used to fund places at existing or new school sites, incorporated within primary or all-through schools. Therefore, we recommend that the per pupil cost of early years provision is assumed to be the same as for a primary school. Similarly, further education places provided within secondary school sixth forms will cost broadly the same as a secondary school place.

17. Special schools require more space per pupil than mainstream schools, and this should be reflected in the assumed costs of provision. We recommend that developer contributions for special or alternative school places are set at four times the cost of mainstream places, consistent with the space standards in Building Bulletin 104.⁸ You can also refer to the National School Delivery Cost Benchmarking report for the costs of delivering SEN school places.⁹

18. Where there is local evidence of higher costs for a particular project, such as a bespoke feasibility study or known site abnormalities, these can be used in preference to the adjusted national average.

Identifying education projects

19. Local plans and other planning policy documents should set out the expectations for contributions from development towards infrastructure, including education of all phases (age 0-19) and special educational needs.¹⁰ We advise local authorities with education responsibilities to work jointly with relevant local planning authorities as plans are prepared and planning applications determined, to ensure that all education needs are properly addressed, including temporary education needs where relevant, such as temporary school provision and any associated school transport costs before a permanent new school opens within a development site. This does not mean double funding the same school places, but allows development to be acceptable in planning terms when it is not possible to open a permanent new school at the point of need. When a permanent new school is delivered (or the relevant financial contribution is received), no further contributions to temporary provision should be required.

20. We recommend that you identify a preferred and 'contingency' school expansion project in a planning obligation, as long as both would comply with the Section 106 tests. This will help you respond to changing circumstances and new information, such as detailed feasibility work leading you to abandon a preferred expansion project.

⁸ [Primary and secondary school design guidance.](#)

⁹ [National School Delivery Cost Benchmarking: Primary, Secondary and SEN Schools](#)

¹⁰ [National Planning Practice Guidance](#)

21. We advise you to consider the realistic potential for schools in your area to expand or increase capacity through other alterations, in discussion with academy trusts, and identify site options for any new schools (within proposed housing developments or on standalone sites). Including suitable projects in the local planning authority's infrastructure funding statement will ensure that developer contributions are clearly identified as the funding source where new schools, expansions or alterations are required due to housing growth. This background work will also minimise the risk of a specified school project in a planning obligation proving undeliverable. Planned expansions to academies may require an agreement between the local authority and academy trust to ensure that school places provided by developer contributions are commissioned/delivered appropriately.

Safeguarding land for schools

22. National Planning Practice Guidance advises on how local planning authorities should prepare plans and take account of education requirements. We advise you to work with local planning authorities and developers to ensure your long-term pupil place planning objectives are reflected in the development plan (and supplementary planning documents which do not form part of the development plan, but which are material planning considerations).¹¹ Precise policies can aid decision-making later, setting out the total amount of land required for education, and the approach to securing equitable developer contributions when one developer provides the land for a new school, though the need for the school is generated by more than one development or phase.

23. You may wish to safeguard additional land when new schools within development sites are being planned, to allow for anticipated future expansion or the reconfiguration of schools to create a single site. 'Future-proofing' can sometimes be achieved informally through a site layout that places open space adjacent to a school site. Where there is a forecast need for new school places that is not linked exclusively to a particular development, the development plan can allocate specific areas of land for new schools or school expansion, and safeguard specific parcels of land within wider development sites for education use. Safeguarded land within larger site allocations can be made available for purchase by the local authority within an agreed timescale, after which the land may be developed for other uses.

24. While developers can only be expected to provide free land to meet the education need from their development, the allocation of additional land for education use within a development plan will make it more difficult for land owners to secure planning consent

¹¹ The development plan is defined in Section 38 of the [Planning and Compulsory Purchase Act 2004](#), and comprises the spatial development strategy, development plan documents and neighbourhood development plans.

for alternative uses on that land, enabling you to acquire the site at an appropriate cost that reflects the site allocation. This ensures that land is reserved for education uses, and prevents such land being usurped by uses with a higher development value. Land equalisation approaches can be used in multi-phase developments to ensure the development 'hosting' a new school (and any additional safeguarded land) is not disadvantaged. Nevertheless, the market price for the land will depend on its permissible uses. Land allocated for educational use in a local plan would usually have limited prospect of achieving planning permission for any other uses. Independent land valuation may be required to establish an acquisition cost. National Planning Practice Guidance provides advice on land valuation for the purposes of viability assessment.

25. Compulsory purchase may have a potential role in supporting the delivery of new education facilities. However, it is a tool of last resort and compulsory purchase orders (CPOs) will only be confirmed (i.e. approved) if there is a compelling case in the public interest. Where an acquiring authority seeks to acquire land for the purposes of providing education facilities, its justification for doing so may be strengthened if the site is allocated for such a use in an up-to-date development plan. Planning policy is also taken into account for the purposes of assessing compensation payable to affected landowners.

26. Where new schools are planned within housing developments, we advise you to consider whether direct delivery by the developer would represent the best value for money, subject to an appropriate specification and pre-application support from the local planning authority. Advice on complying with state aid and public procurement legislation is provided in the Annex.

Strategic developments and new settlements

27. Garden communities are an increasingly popular way of planning for housing growth at the scale required to meet the country's housing needs. The government is supporting a number of garden communities under the Garden Communities Programme. We have published guidance on education provision in garden communities, to assist local planning authorities and Homes England in delivering schools as part of garden communities.¹² We advise you to consider this in conjunction with this guidance on securing developer contributions for education.

28. Strategic planning of urban extensions and new settlements often includes place-making objectives about the early provision of infrastructure, to establish a sense of community and make the place attractive to residents. Early delivery of a school can be problematic if it precedes new housing and draws pupils from existing schools,

¹² [Education Provision in Garden Communities](#)

threatening their viability and resulting in unsustainable travel-to-school patterns. We advise local authorities with education responsibilities to work jointly with local planning authorities and other partners to agree the timing of new school provision, striking an appropriate balance between place-making objectives, education needs and parental preference.

29. Schools can be delivered in single or multiple phases; the best approach will depend on local circumstances and characteristics of the development. Where appropriate, for instance in the early stages of development while the need for school places is growing, developer contributions can be secured for temporary expansions to existing schools if these are required, and transport costs for pupils travelling further than the statutory walking distance.¹³ This will allow a permanent new school to be provided in a single construction phase once the development has generated sufficient pupil numbers, rather than phased construction over a longer period. While the existing pupil cohort may not switch schools initially, children living in the development will usually have priority for admission to the new school and will take up these school places over time.

30. As far as possible (and often in relation to primary schools only), new settlements and urban extensions should be expected to meet their full education requirement. Where an onsite school is required, it should be large enough to meet the need generated by the development. As a general rule, the capacity of existing primary schools beyond the statutory walking distance does not need to be taken into account when calculating developer contributions for permanent onsite schools in new settlements and urban extensions. This promotes sustainable and healthy travel patterns for young people.

31. When a permanent new school is proposed to be built early in the development of an urban extension or new settlement, you will naturally consider the effect this might have on parental demand and the viability of existing schools. To minimise detrimental impacts on existing schools while supporting local planning authorities to plan new communities, you should work with school providers and the relevant Regional Schools Commissioner to promote Admission Arrangements and opening strategies that will maintain equilibrium in school populations across your area. This can include phased delivery, with the initial phase future-proofed for future expansion (such as an oversized assembly hall and dining area) and land safeguarded for the school's expansion when need builds up over a long period, though it is important to secure commitment to the delivery of later phases.

32. You should also work with local planning authorities to ensure that planning policies and planning obligations require a suitable school site to be made available at

¹³ The statutory walking distances are set out in the [Home to School Transport guidance](#)

the appropriate time. If early school delivery is required, the school site must be identified and agreed at an early stage, giving consideration to its accessibility and condition at the point of transfer.

33. If a new school opens in a single phase below its full capacity while it awaits pupils moving to the development, this does not represent an available surplus for other developments assessing their own impact and mitigation, unless the development delivering the new school will not be completed or generate enough pupils to fill the school. Complementary uses that share the school site can be considered for a temporary period while a new school fills. In practice, you may prefer to deliver the school in phases using modular construction methods, linking capacity more closely to emerging need, though the initial phase must still provide a viable sized school.

34. New housing tends to attract more young families than older housing, yielding higher numbers of pupils particularly in the pre-school and primary age groups, though this stabilises over time until the development resembles the mature housing stock.¹⁴ We advise you to respond to initial peaks in demand, such as planning for modular or temporary classrooms, securing a large enough site to meet the maximum need generated by the development. Where new settlements are planned, you may wish to carry out demographic modelling to understand education requirements in more detail, taking account of similar developments and different scenarios such as an accelerated build rate.

35. Where a requirement for both primary and secondary schools has been identified, we recommend you consider if there would be cost efficiency, space saving and educational benefits in providing an all-through school.

36. There may also be sustainability, efficiency and educational benefits in relocating an existing school, for example where a development is large enough to require a new secondary school but it would be too close to an existing secondary school, both of which would be relatively small. Such reorganisation of the school estate, relocating and expanding an existing school on a development site, may be necessary to make the development acceptable in planning terms, if the alternative distribution, size or condition of schools would be unsustainable. Proposed changes are subject to following the relevant process, depending on the category of the school.¹⁵ We advise that you work collaboratively with local planning authorities to ensure your objectives for the school estate are reflected in planning policies and decisions.

¹⁴ This phenomenon is widely reported in local authority evidence, such as for [Central Bedfordshire](#) and [North Essex Garden Communities](#).

¹⁵ [School organisation guidance and transparency data](#).

37. There is often a degree of uncertainty around the delivery of urban extensions and new settlements, in view of the long timescales involved, multiple developers and changeable market conditions. The build rate of development may be slower than anticipated, while land provided for a school may need to be returned to a developer if it is not used within an agreed period. Therefore, it is important to consider carefully the clauses within planning obligations if they impose any time restriction on the use of transferred education land, and the potential for the overall phasing of developer contributions to cause delays. Where land has to be returned to a developer, this should be on the same terms as it was given; land provided by free transfer should be returned as such.

38. We also advise you to consider any potential uplift in the value of a development following the grant of planning permission and before all housing units are sold or let. It may be possible to secure the full education contribution, where this had previously been reduced on viability grounds, using planning obligation review mechanisms. National Planning Practice Guidance advises further on how viability should be assessed during the lifetime of a project. We recommend that you work with local planning authorities to set out in plans the circumstances where review mechanisms in planning obligations may be appropriate, allowing you to maintain policy compliance on education contributions when circumstances have changed.

39. To support the delivery of strategic development at pace, you may need to forward-fund school provision within an urban extension or new settlement, using basic need funding or local authority borrowing if necessary and recouping these costs later through developer contributions secured by a planning obligation. While we recognise there are some inherent risks to this, our position on the use of basic need funding and other forward-funding options is set out in paragraphs 5-7 above.

Annex

Developer delivery of new schools

1. Direct delivery of new schools by housing developers may represent good value for money. This model of delivery should not contravene state aid or public procurement rules. While we advise you to seek your own project-specific legal advice when necessary, this annex sets out the department's view on the legal position at the time of publication. Local authorities should keep abreast of emerging case law that may have a bearing on this advice, and any legislative changes following the UK's exit from the European Union.¹⁶
2. While the department supports developer delivery of schools in principle, we recognise that local circumstances vary and it will not always be the preferred option. Nevertheless, high quality design and performance for developer-built schools are achievable through the planning and building control process, and compliance with national standards such as the DfE building bulletins, output specification and other design standards and guidance.¹⁷
3. When developer delivery is proposed, we recommend a partnership approach between the local authority, academy trust (where relevant) and developer to negotiate a brief and design specification (see further advice below regarding procurement); such collaboration is good practice and helps to avoid disputes.
4. We recommend that planning obligations or other mechanisms provide detail on how local authorities intend to step in and deliver the school if developer delivery falls through but the school is still required. Longstop clauses should ensure that the land for the school is transferred early enough for the local authority to intervene and provide the school at the right time. In these situations, the planning obligation should also require financial contributions to be made in lieu of the 'in kind' provision of the school by the developer, making use of review mechanisms where necessary to respond to changing circumstances. Even in cases where a planning obligation is silent on this subject, Section 106(6) of The Town and Country Planning Act 1990 provides that the local authority may enter land to carry out works required by a Section 106 agreement where the developer is in default, although where a risk of non-delivery is identified, we

¹⁶ At the time of publication, current rules are expected to be preserved in domestic law. See [The State Aid \(EU Exit\) Regulations 2019](#) (draft) and [EU Exit guidance on public-sector procurement](#).

¹⁷ [School design and construction guidance](#).

recommend that specific planning obligations are secured to mitigate that risk (for example through performance bonds).

State Aid

5. In some cases, all relevant parties will support developer delivery of a new school, but the local authority accepts that the developer cannot fully fund the new school and its delivery would need a degree of public subsidy. It is important this this does not constitute unlawful state aid to the developer.¹⁸

6. The question is whether a contribution by a local authority to the cost of the school (otherwise being funded by the developer under a planning obligation) is a grant of incompatible state aid to that developer. The answer depends on the circumstances that give rise to the local authority's contribution. There are two principal questions. Has the public contribution arisen:

- (a) Because planning law/policy only requires the developer to make a partial contribution; or
- (b) Because the local authority has otherwise volunteered to make this contribution?

Planning law/policy only requires the developer to make a partial contribution

7. This is unlikely to give rise to incompatible state aid (unlawful). If planning law/policy only requires the developer to make a partial contribution then no incompatible state aid should arise merely because the local authority (or another public sector body) funds the balance of those costs. This is subject to the relevant public sector body satisfying itself (through benchmarking and/or a cost consultant's report) that the developer's costs of building the school are not more than market costs. This would apply even if the initial application of planning policy dictated that the developer makes a full contribution but after applying planning viability principles (taking account of the total infrastructure burden on the development) the developer's contribution was reduced.

8. National Planning Practice Guidance says that for the purpose of plan making, an assumption of 15-20% of gross development value may be considered a suitable return to developers, in order to establish the viability of plan policies. A local authority's contribution to school delivery which supports a higher profit margin for a particular developer may be considered a voluntary contribution (see below) and a selective benefit to one developer, which may amount to unlawful state aid.

¹⁸ Guidance relating to [state aid](#) and [CIL](#), and [The State Aid \(EU Exit\) Regulations 2019 \(draft\)](#).

9. The rationale for this assessment is that the key state aid test to be applied to the developer is whether it has selectively benefitted from the local authority's contribution. For example, if under planning law/policy it (or any other developer) would have only been required to fund 60% of the school's costs then it has not selectively benefitted as another developer (in identical circumstances) would also only be required to make the same 60% contribution. The extent of the local authority's contribution (if required) will usually be determined through viability assessment.

The local authority has otherwise volunteered to make this contribution

10. A voluntary contribution by the local authority would raise an issue that its funding may grant a selective benefit to the developer and could amount to incompatible state aid (unlawful).

11. The local authority may require a larger school than the development must provide, such as an increase to two forms of entry (2FE) when the development generates a need for a 1.5FE school. This may constitute a voluntary contribution but would not provide a selective benefit to the developer, provided any other developer in identical circumstances would receive the same contribution for additional school places, so in such circumstances the risk that this would amount to incompatible state aid is considered low.

Public contracts and OJEU procurement

12. Under the Public Contracts Regulations 2015 (PCR), a contract for a pecuniary interest may be considered a 'public contract'. If there is consideration being provided by the contracting authority, either directly or indirectly, then the contract will be subject to the PCR.

13. UK Case law makes a distinction between planning obligations and other contracts, recognising that the public body is exercising its planning powers in order to regulate the development of land, rather than procuring an economic benefit.¹⁹ Therefore, where a Section 106 agreement places an obligation on a developer to provide land/or buildings for a new school because this is necessary to make the development acceptable in planning terms (a prerequisite for a planning obligation), that Section 106 agreement does not constitute a public contract.

14. A separate development agreement with a developer may constitute a public contract, specifically a public works contract, which would require the local authority to undertake procurement under the Official Journal of the European Union (OJEU) or the

¹⁹ *Faraday Development Ltd. and West Berkshire Council and St Modwen Developments Ltd. [2018] EWCA Civ 2532 and Helmutt Muller GmbH v Bundesanstalt für Immobilienaufgaben (C-451/08)*

equivalent following the UK's exit from the EU. it is important that a number of principles contained in relevant case law²⁰ are complied with:

- a) there is no positive works obligation on the developer (either immediate or contingent) to build the school in any event (meaning could the public authority force the developer to build the school even if that developer never implemented its planning permission); and/or
- b) The public body has no 'decisive influence' on the design of the school. (The public authority is entitled to contribute to discussions about, be consulted on and set parameters about the building (e.g. compliance with national standards) but not have the ultimate decision about the works specification). Ultimately, it is for the courts (and the European Court of Justice) to rule upon the lawfulness of any public works funding.

15. As set out above, where a Section 106 agreement secures the provision of a school as a planning requirement and no consideration arises, it is not likely to be a public contract so is unaffected by considerations around positive works obligations and decisive influence over design. If a local authority then enters into a separate contract with a developer in addition to the planning obligation, it is important that the developer would not be legally obligated to perform the works and could walk away from them at any time, until the development commenced.

16. The extent to which a contracting authority can become involved in the design of works before it is deemed to be "specifying" such works has been explored in case law and guidance.²¹

17. A contract would only be deemed a public works contract if the contracting authority took measures to define the type of work to be undertaken by the developer partner or at the very least had a "decisive influence" on its design. "Requirements specified by the contracting authority" has been taken to exclude the exercise of a public authority's urban planning powers in examining building plans presented to it, or the decision to apply its planning powers in relation to a particular project.

18. The former Office of Government Commerce (OGC) provided further interpretation of the land exemption. In particular they were of the view that:

- (a) national or local land-use planning policies, requirements or restrictions for a site would not in themselves comprise a requirement specified by the contracting authority;

²⁰ The Queen (on the application of Midlands Co-operative Society Limited) and Birmingham City Council [2012] EWHC 620 (admin); Helmutt Muller GmbH v Bundesanstalt für Immobilienaufgaben (C-451/08); Faraday Development Ltd. and West Berkshire Council and St Modwen Developments Ltd. [2018] EWCA Civ 2532

²¹ Helmutt Muller GmbH v Bundesanstalt für Immobilienaufgaben (C-451/08) and Office of Government Commerce (OGC) Information Note 12/10 (30 June 2010).

- (b) a broad invitation that a site should be developed in accordance with applicable or national local land-use planning policies but with the developer free to put forward its own intentions, proposals and specifications within these parameters is unlikely to trigger a requirement specified by the contracting authority.

19. Although the OGC no longer exists as a distinct government department, their guidance note has been referenced by the domestic Courts and it is still considered useful guidance in the UK. However, reliance on OGC views may need to be reviewed if their position is overruled by the European Courts or the Commission, or by domestic Courts following the UK's exit from the EU.

20. When school construction is complete, an academy trust takes on responsibility for the building and its operation. In terms of procurement law, it is the entrustment by the contracting authority of the obligation to undertake the works that is relevant, not the reasons for doing so, or the beneficiary of the works.²² The fact that a school is to be transferred to an academy trust post-construction does not affect consideration of whether the procurement amounts to a public works contract.

²² Jean Auroux v Roanne (C-220/05).



Department
for Education

© Crown copyright 2019

This publication (not including logos) is licensed under the terms of the Open Government Licence v3.0 except where otherwise stated. Where we have identified any third party copyright information you will need to obtain permission from the copyright holders concerned.

To view this licence:

visit www.nationalarchives.gov.uk/doc/open-government-licence/version/3

email psi@nationalarchives.gsi.gov.uk

write to Information Policy Team, The National Archives, Kew, London, TW9 4DU

About this publication:

enquiries www.education.gov.uk/contactus

download www.gov.uk/government/publications

Reference: DfE-00233-2019



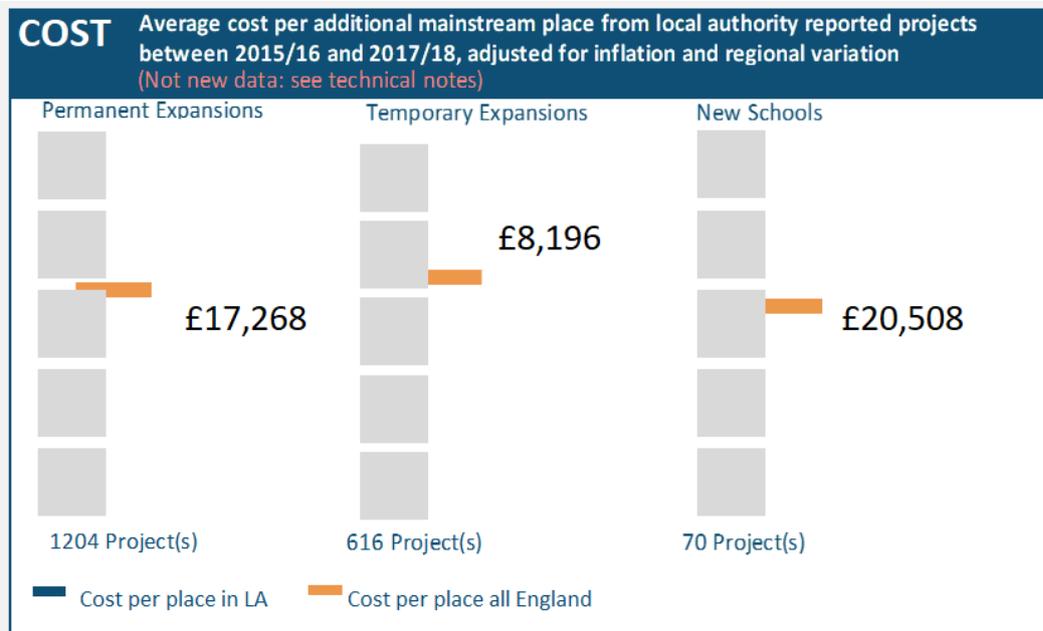
Follow us on Twitter:
[@educationgovuk](https://twitter.com/educationgovuk)



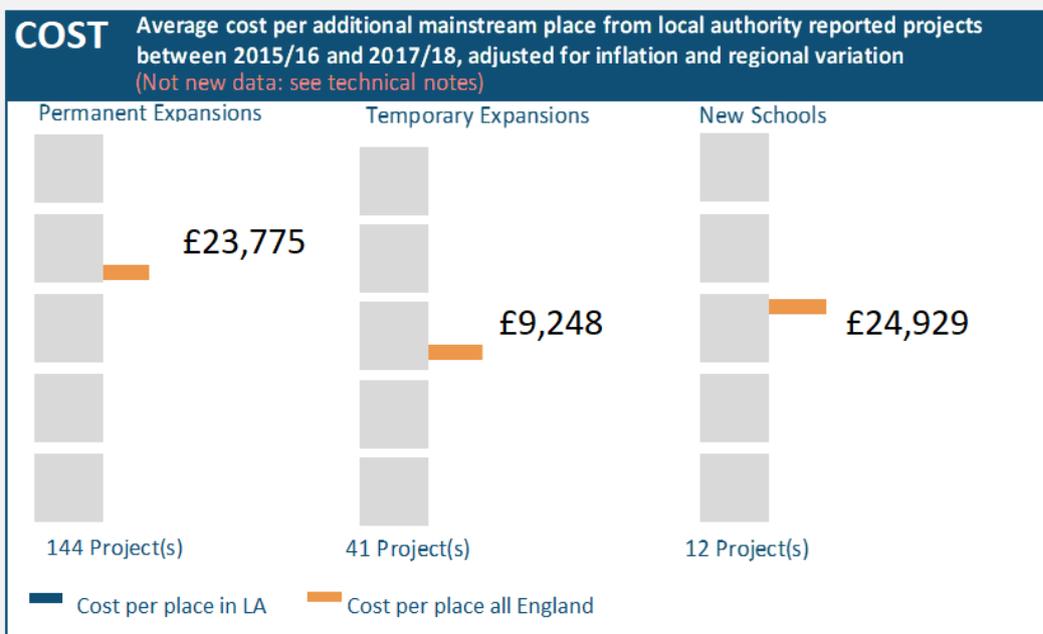
Like us on Facebook:
facebook.com/educationgovuk

Department for Education: Local Authority School Places Scorecard Costs (2019)

Primary Education:



Secondary Education:



Technical Appendix 3: Education (Mainstream Schools)

1.0 Service Overview

- 1.1 Hertfordshire County Council (the county council) is the local authority with statutory responsibility for education. The county council is subject to a number of statutory duties and responsibilities including:
- Promoting high standards of education
 - Planning and commissioning school places in its local authority area
 - Extending diversity and choice
 - Co-ordinating admissions in the normal admissions round for all maintained and academy schools
 - Resourcing the shared maintenance, improvement to, and provision of, the built school environment, and securing value for money.
- 1.2 The county council has a duty to secure sufficient school places in its area, ensuring that every child has access to a school place. The county council fulfils its planning responsibilities by:
- forecasting and analysing short-term demand for school places in order to identify an appropriate balance between supply and demand
 - negotiating the right number of places on an annual basis, within a diverse and varied education landscape including academies and other 'own admitting authority' schools outside the county council's control
 - undertaking longer term strategic planning to ensure sufficient education infrastructure is identified within the local plan process to meet the longer-term needs arising from proposed housing growth.
- 1.3 As the county council has the statutory responsibility to ensure that there are sufficient school places available across the county, it remains the appropriate authority to assess the requirements for school place provision for any new housing developments, be a signatory to any S106 agreement and receive the appropriate contributions. The county council has a duty to set out the requirements for any new school needed to serve a new or growing community in order that potential providers may express interest in running that school. Where a Section 106 agreement provides the land and funding for a new school, the county council will usually procure the school building and then arrange any necessary leasehold transfer to the provider.
- 1.4 Further information on school place planning is available at www.hertfordshire.gov.uk/schoolplaces

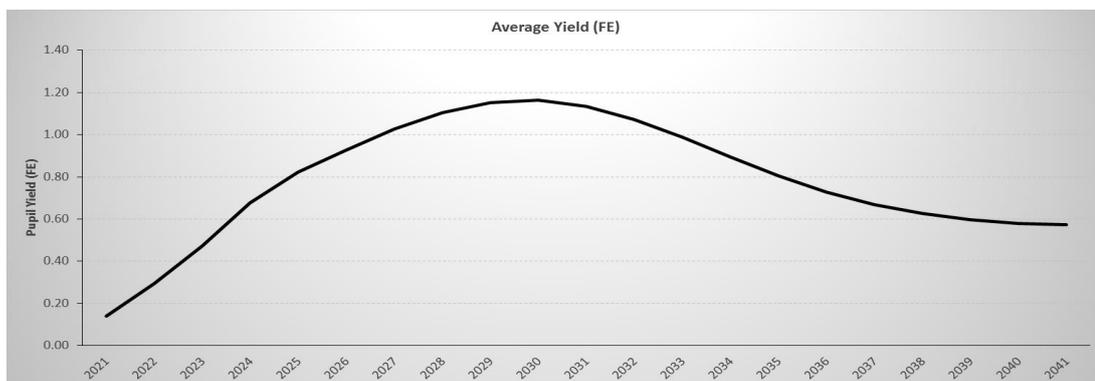
2.0 Assessing need and calculating contributions

- 2.1 Where there is insufficient capacity in existing local schools, or where demand is projected to exceed supply as a result of growth from new housing, the county council will seek planning obligations to mitigate the impact of development. Developer contributions towards new school places should provide both funding for construction¹ and land where applicable.

Methodology

¹ Construction costs include fit out, furniture and equipment and ICT

- 2.2 The potential pupil yield arising from an individual development site is currently assessed using the Hertfordshire County Council Demographic Model² (the Hertfordshire model or HDM), which projects the average number of children likely to emerge from different types, sizes and tenures of dwellings over time. The modelled yields are calibrated against observed yields from recent new developments in Hertfordshire, which have been assessed as part of a detailed Pupil Yield Study³ (PYS). Once the PYS is complete, the county council intends to adopt an Education Model based solely on observed yields; currently expected in autumn 2021. This Education Model will replace the HDM as the bases for projecting child yield from new developments and determining S106 contributions.
- 2.3 New housing tends to attract a greater proportion of young families than older housing, yielding higher pupil numbers particularly in the pre-school and primary age groups. The Hertfordshire model allows the pupil yield projection to change with time, as children grow older and age into different school phases and, in the longer term, the development starts to conform to an age structure in line with mature housing stock in the wider community. The result is often a peak in demand in the medium term as, for example, pre-school children age into the primary phase. The county council seeks contributions which reflect this change over time and recognise that an element of ‘temporary’ provision may be needed to meet peaks in demand.
- 2.4 Permanent per-place costs will be sought for places needed for a period of seven years or more at the primary phase and five years or more at the secondary phase. Temporary per-place costs will be sought for places which would be required for less than seven years at primary, or less than five years at secondary. Seven and five years represent the lifetime of one cohort at the primary and secondary phase respectively and provides a reasonable delineation between the requirement for permanent and temporary provision.
- 2.5 In the following example, the projected average primary age pupil yield for a theoretical development is shown in the graph below.



- 2.6 In this scenario, the county council would seek contributions to provide permanent places at approximately 1FE (1 form of entry, equivalent to 30 additional places in each of year group), an average level of demand which is exceeded for seven

² A separate guide on the Hertfordshire Demographic Model is available on the website.

³ More information regarding the PYS is available on the county council’s website. Emerging data based on observed yields from over 6,000 new dwellings has been used to calibrate the HDM.

years⁴. Temporary costs would be sought to cover the average projected demand above 1FE.

- 2.7 Department for Education (DfE) guidance⁵ confirms that Local Authorities should seek contributions to meet estimated peak yield from new housing. The county council believes that where additional places are needed across a sustained period and a number of year groups, it is inappropriate and impractical to attempt to provide them through temporary provision (which is usually made for a single year group per school). Providing additional capacity over a number of years at a single school would be expected to trigger a formal 'prescribed alteration' (or 'significant change' in academy schools) process⁶. Such a process is invariably linked to providing high-quality permanent accommodation rather than short-term temporary buildings, with the associated higher capital cost. The approach outlined above enables the county council to deliver additional capacity to the estimated peak whilst acknowledging that some places may be delivered in temporary accommodation due to the projected yield changing over time.

Nursery and Post-16 Contributions

- 2.8 The county council expects that all new primary schools will include nursery classes, while expansions of existing schools will, in most cases, also involve an increase in the number of nursery places. Contributions towards nursery provision will be sought at permanent and temporary per-place rates to the same proportion of peak yield as is calculated for the development at the primary phase. Contributions will not be sought where additional nursery provision is not being provided as part of the mitigation project.
- 2.9 Similarly, in Hertfordshire the vast majority of secondary schools offer post-16 (sixth form) provision. It is expected that new secondary schools will also offer post-16 education. Contributions towards post-16 provision will be sought at permanent and temporary per-place rates to the same proportion of peak yield as is calculated for the development at the secondary phase. Contributions will not be sought where additional post-16 provision is not expected to be provided as part of the mitigation project.

Per-Place Cost Calculations

- 2.10 Per-place costs are, for the majority of projects, the national average costs published by the Department for Education in its local authority school place scorecards⁷, regionally adjusted for Hertfordshire. These costs are expected to be updated following the DfE's annual data release, or whatever schedule the department might adopt in future.
- 2.11 Where the cost to deliver the project is expected to be in excess of the funds which would otherwise be achieved through the application of these charges, such as might be the case for projects with abnormal costs due to planning, highways or construction limitations (e.g. located on a flood plain, in conservation areas, or on constrained sites), or where the school place planning solution necessitates it, then

⁴ Note: the graph shows average demand (i.e the average across all year groups). Demand within a single year of entry in this example is likely to exceed 1FE for 10 years or more.

⁵ DfE 'Securing Developer Contributions for Education'

⁶ DfE statutory guidance 'Making significant changes ('prescribed alterations') to maintained schools', and DfE 'Making significant changes to an open academy'.

⁷ DfE scorecards are available at www.gov.uk/government/collections/school-places-scorecards

the full cost of providing the identified project and/or purchasing additional land to do so may be sought from the developer. The county council will specify the date to which costs have been rebased (e.g. 1st quarter 2020) to allow future indexation against the Building Cost Information Service (BCIS) All-In Tender Price of Index (TPI).

- 2.12 In some instances, an individual development may not be required to provide a whole new school to make it acceptable in planning terms but land may be required to deliver a new school project. Funding for the remaining school site (proportionate land and build costs⁸) would be met by other developments coming forward in the local area. The county council would expect such additional land to be designated specifically for education use within the local plan and made available for purchase by the local authority and allocated for educational use would usually have no prospect of achieving planning permission for any other uses and the county council would therefore expect to acquire it at a cost which reflected its intended use.
- 2.13 Where there is a cost to the local authority to acquire land to deliver a scheme to provide additional places, the additional cost of purchasing the land will be added to the per-place construction contribution as calculated above. A representative proportion of land costs will be added where multiple developments are being mitigated by a single additional place scheme.

Indicative Education Contributions

- 2.14 The following tables show indicative contributions for a new build project, by dwelling type, bed-size and tenure, which might be sought from typical sites within each of the broad development types identified at the strategic local plan⁹ stage.
- 2.15 Costs are weighted according to the relative pupil yield from the different types and sizes of dwelling¹⁰; a 3-bed house will, for example, produce more children on average than a 1-bed flat and therefore require a greater level of mitigation. Similarly, most socially rented properties are expected to produce on average more children than the equivalent sized market¹¹ value dwelling, with the exception of 1-bed properties. The contributions sought from each type and size of property is therefore in line with the projected average pupil yield from it, which in turn dictates the number of additional school places which will be needed to mitigate a particular development.
- 2.16 For information regarding the approach to Tiers 1, 2 and 3 for education planning purposes, please consult the Hertfordshire Local and Strategic Plans Engagement Document available on our website.

Indicative Cost Tables by Phase of Education

Education: Nursery

TIER	HOUSES				FLATS			
	1 bed	2 bed	3 bed	4+ bed	1 bed	2 bed	3 bed	4+ bed

⁸ Build/construction costs include fit out, furniture and equipment and ICT.

⁹ Further information regarding the tiered approach to strategic planning can be found in the Local Plan Engagement document.

¹⁰ This weighting is based on the underlying HDM, with overall yields calibrated against observed yields from the emerging PYS. Average single-dwelling yield values (and therefore costs) will be reviewed and updated as part of the ongoing PYS.

¹¹ Market value is taken to include other categories of dwelling which act in substantially the same way with regard to pupil yield, such as intermediate housing. Similarly, social rent is taken to include any future categories of affordable dwelling which might display the same characteristics.

	Market value housing (and other)							
Tier 1	£347	£695	£1,158	£1,356	£381	£762	£723	£889
Tier 2	£286	£572	£954	£1,117	£251	£503	£477	£587
Tier 3	£346	£692	£1,153	£1,350	£246	£492	£467	£574
	Social rent housing*							
Tier 1	£116	£1,786	£2,242	£3,489	£381	£2,385	£2,309	£2,674
Tier 2	£95	£1,471	£1,847	£2,875	£251	£1,574	£1,523	£1,764
Tier 3	£115	£1,779	£2,233	£3,475	£246	£1,541	£1,492	£1,728

Education: Primary

TIER	HOUSES				FLATS			
	1 bed	2 bed	3 bed	4+ bed	1 bed	2 bed	3 bed	4+ bed
	Market value housing (and other)							
Tier 1	£2,434	£4,796	£7,681	£9,470	£2,560	£5,873	£5,531	£6,325
Tier 2	£2,256	£4,447	£7,121	£8,780	£1,381	£3,168	£2,984	£3,412
Tier 3	£1,590	£3,134	£5,019	£6,188	£1,443	£3,310	£3,117	£3,565
	Social rent housing*							
Tier 1	£915	£10,617	£15,018	£17,092	£2,409	£15,477	£14,524	£15,986
Tier 2	£848	£9,844	£13,923	£15,846	£1,300	£8,350	£7,836	£8,624
Tier 3	£598	£6,937	£9,812	£11,168	£1,358	£8,723	£8,186	£9,010

Education: Secondary

TIER	HOUSES				FLATS			
	1 bed	2 bed	3 bed	4+ bed	1 bed	2 bed	3 bed	4+ bed
	Market value housing (and other)							
Tier 1	£2,321	£4,398	£7,075	£8,677	£2,378	£5,304	£4,889	£5,853
Tier 2	£2,167	£4,105	£6,603	£8,099	£1,291	£2,881	£2,655	£3,179
Tier 3	£1,499	£2,840	£4,569	£5,604	£1,325	£2,955	£2,724	£3,261

	Social rent housing*							
Tier 1	£793	£10,065	£13,828	£15,108	£2,195	£14,593	£13,286	£14,478
Tier 2	£741	£9,394	£12,907	£14,102	£1,192	£7,926	£7,216	£7,864
Tier 3	£512	£6,501	£8,931	£9,758	£1,223	£8,130	£7,402	£8,066

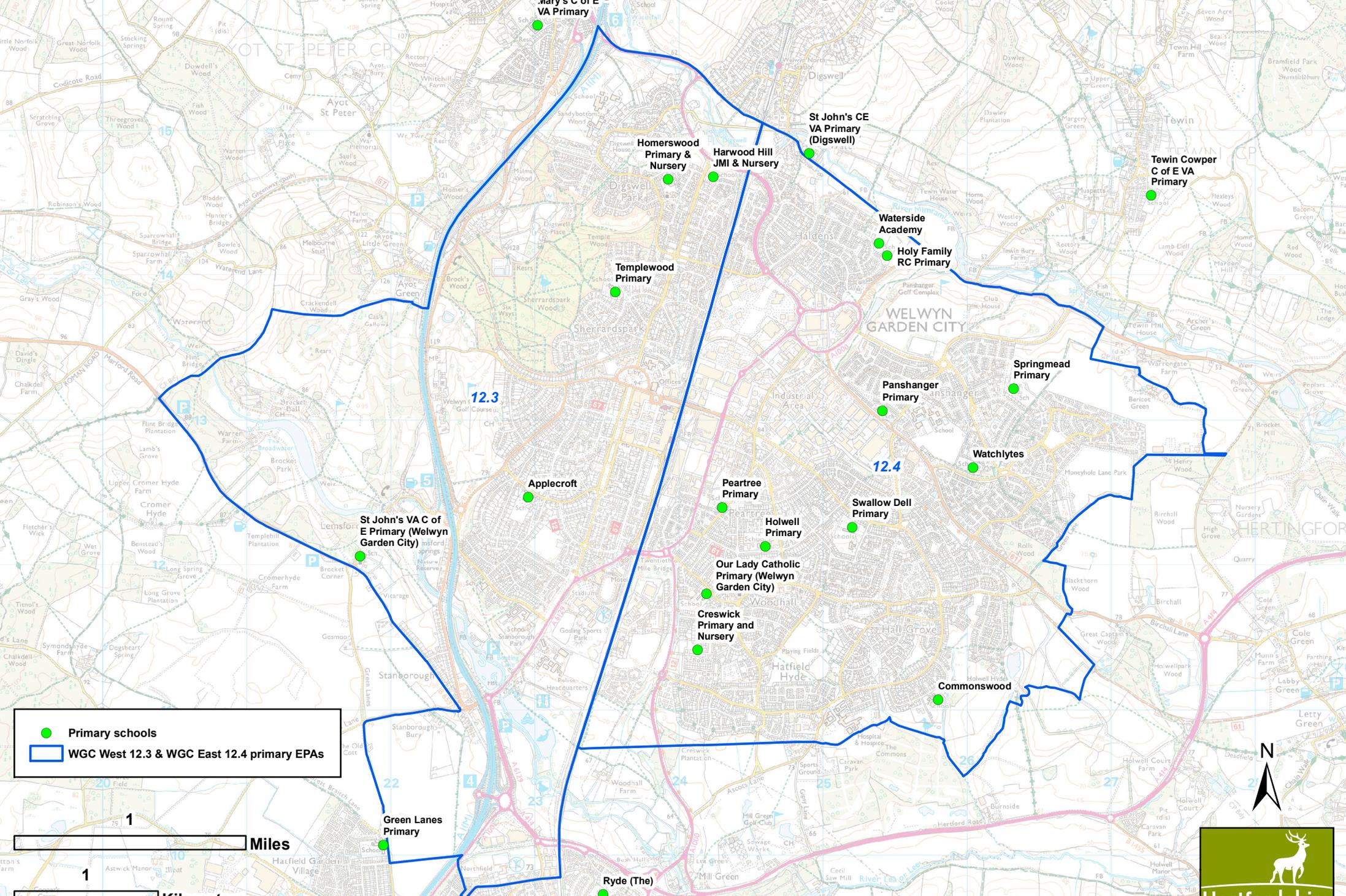
Education: Post-16

TIER	HOUSES				FLATS			
	1 bed	2 bed	3 bed	4+ bed	1 bed	2 bed	3 bed	4+ bed
	Market value housing (and other)							
Tier 1	£553	£1,106	£1,805	£2,142	£637	£1,274	£1,187	£1,487
Tier 2	£516	£1,032	£1,685	£2,000	£346	£692	£645	£807
Tier 3	£357	£714	£1,166	£1,384	£355	£710	£662	£828
	Social rent housing*							
Tier 1	£184	£2,711	£3,542	£4,291	£637	£3,800	£3,282	£3,935
Tier 2	£172	£2,530	£3,306	£4,005	£346	£2,064	£1,783	£2,137
Tier 3	£119	£1,751	£2,288	£2,772	£355	£2,117	£1,829	£2,192

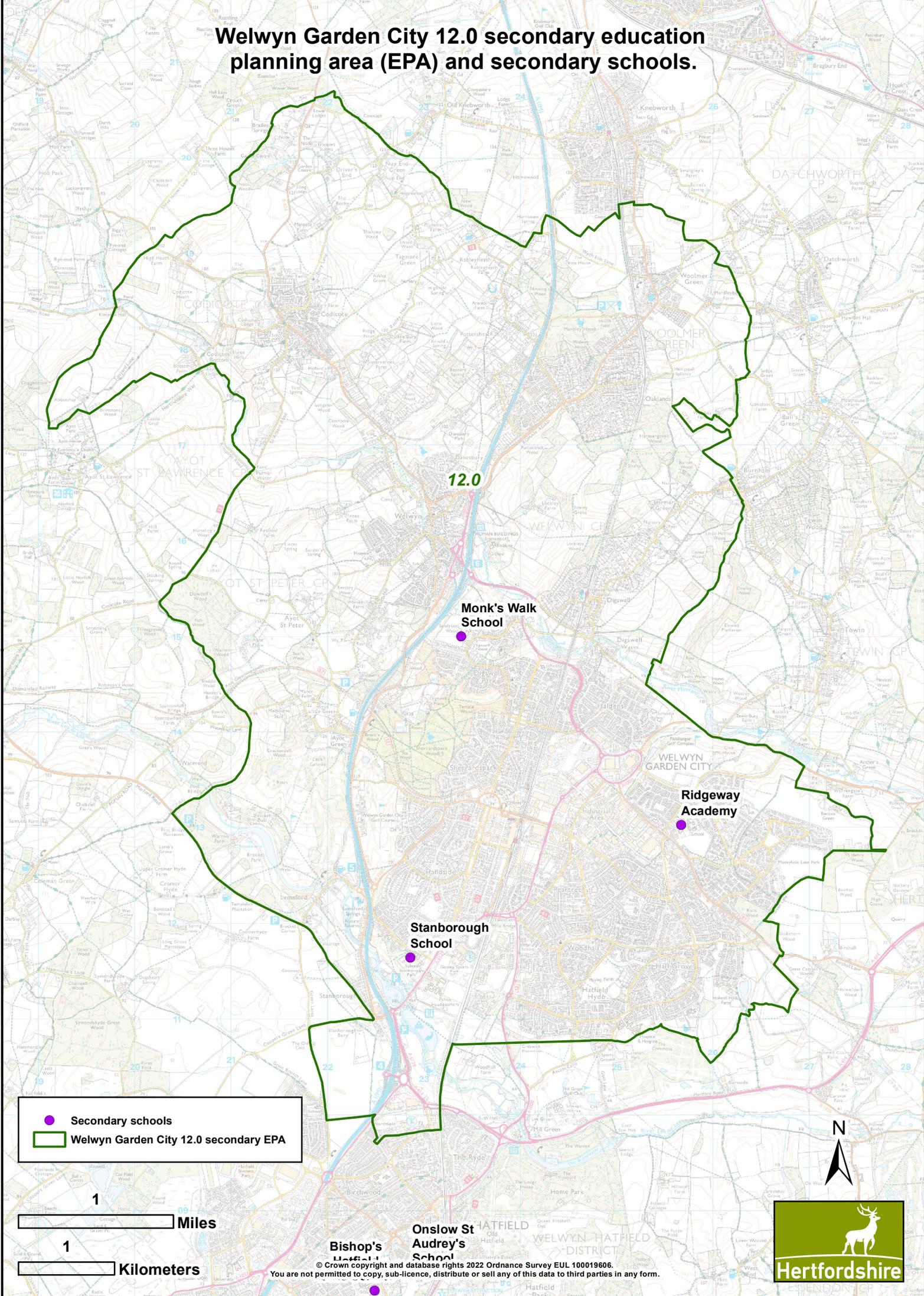
*Refers to those properties that require nomination rights to occupy, that is properties for which the occupation is dictated by the number of occupiers.

- 2.17 All costs shown above are based on 1Q2020 BCIS prices.
- 2.18 The illustrative tables above are included as a guide to help inform viability assessments and financial planning; the actual contribution for each development site will be calculated individually once a planning application has been made. This ensures the amount sought is fair, proportional and aligned with the impact of the specific development. Sites with differing housing mixes and trajectories will have different pupil yield projections and therefore contribution amounts.
- 2.19 Both tables shown above relate only to construction costs and do not make any allowances for purchasing land. Where additional land is required to allow the delivery of an education project, the cost (or the relevant proportion of the cost) of acquiring the land will be added to the pupil place-led costs illustrated in the tables above.
- 2.20 The tables are based on the cost of providing a new school. Contributions sought towards expansion of existing schools may be lower. Conversely, where abnormal site features or design requirements for a particular project mean that the cost of mitigating development is higher than standard, the amount charged may increase proportionally.

WGC West 12.3 and WGC East 12.4 primary education planning areas (EPAs) and primary schools.



Welwyn Garden City 12.0 secondary education planning area (EPA) and secondary schools.



12.0

Monk's Walk School

Ridgeway Academy

Stanborough School

● Secondary schools
■ Welwyn Garden City 12.0 secondary EPA

1 Miles

1 Kilometers

Bishop's Hatfield School
Onslow St Audrey's School

© Crown copyright and database rights 2022 Ordnance Survey EUL 100019606. You are not permitted to copy, sub-licence, distribute or sell any of this data to third parties in any form.



SEND Special School Place Planning Strategy



2020-2023



Contents

Introduction	3
Meeting the educational needs of children with SEND	4
Supporting Children with SEND – The Graduated Response	5
The rising demand for special school places	6-7
Special School Forecasts 2020-2025	8
Severe Learning Difficulties (SLD) & Profound Neurological Impairment (PNI)	9-10
Social Emotional & Mental Health (SEMH)	11-12
Learning Difficulties (LD)	13
Hearing Impairment (HI)	14
Communication & Autism - children whose needs fall between existing special school sectors (CA)	15 -16
SEND Special School Place Planning Priorities 2020-2023	17
Appendices	18-22



Introduction

The aim of the SEND Special School Place Planning Strategy is to ensure that there is sufficient capacity in Hertfordshire special schools, so that children with SEND (Special Educational Needs & Disabilities) have access to high quality local provision that meets their needs.

The strategy reflects the outcomes of the following workstreams of the overarching SEND Strategy 2018-2023¹ as they affect the need for special school places:

Specialist Provision Workstream

Vision: *A pattern of specialist provision is strategically planned on the basis of evidence of what is required now and in the future. This enables the needs of more children and young people with complex SEND to be met as close as possible to their home and local community.*

Behaviour and Social Emotional and Mental Health (SEMH) Workstream

Vision: *A flexible continuum of support is in place in each area to ensure that children and young people with significant needs affecting their behaviour and / or mental health can access their entitlement to education provision and their outcomes improve.*

A pattern of special school provision has been identified which will build on the existing provision to improve outcomes for all children with SEND, ensure that there are sufficient places to meet forecast demand and achieve best value for money.

¹View the SEND Strategy



The special school strategy is informed by evidence-based analysis of need and demography which has identified the number of special school places needed to 2025.

The strategy will be reviewed annually.

Meeting the educational needs of children with SEND

Our vision for all children in Hertfordshire with SEND is that they will have their needs met with a range of inclusive provision available through our mainstream schools, specialist resource provision (including Education Support Centres and Primary Support Bases) and special school provision.

Children with SEND will have access to a high quality, broad and balanced curriculum which will be holistic and provide support across education, health and social care to meet their needs.

Our approach will always have the child and their family at the centre of what we do and we will co-produce our strategies, working closely with existing schools and our parent carer forum (HPCI)².

Our aim is to ensure that we meet the needs of our growing SEND population. Wherever possible, we will ensure that all children and young people with SEND have access

to high quality local provision that meets their needs and will look to provide equity of provision across the county.

We will clearly identify the type of support available for all children with SEND in our mainstream schools, the targeted support available across mainstream and specialist settings (including SRPs, ESCs and PSBs³) and the highly specialist support that could be accessed in our special schools.

We will ensure that we are admitting our children to the correct settings and will monitor their progress to ensure that the provision is meeting their needs.



² HPCI – Herts Parent Carer Involvement

³ SRP – Specialist Resource Provision / ESC – Education Support Centre / PSB – Primary Support Base

Supporting Children with SEND

– The Graduated Response

UNIVERSAL

Children and their families are supported by ensuring that each child's needs are provided for and uniqueness is celebrated. Using this universal approach, most children with SEND will have their needs met at a mainstream school.

TARGETED SUPPORT

Some children will need a little more targeted support in a mainstream school.

TARGETED PLUS

For children who will need support from outside agencies.

SPECIALIST

For children who need something more individual to meet their needs, as well as support from outside agencies.

SPECIALIST PLUS

Those children who need intensive support in a smaller environment for a short period may be supported at specialist provision including SRPs, AP, ESCs and PSBs. Others will need a special school place.

SPECIAL SCHOOLS

Hertfordshire currently has 25 special schools. These schools are split into sectors, by need:

PNI : two schools for pupils with physical and neurological impairments [1 primary (3 – 11) and 1 all age (3 – 18)] ;

SLD : six schools for pupils with severe learning disabilities and profound and multiple learning disabilities [1 x all age (3 – 19), 5 x all age (2 – 19)] ;

SEMH : six schools for pupils with social, emotional and mental health disabilities [2 x primary (5 – 11), 4 x secondary (11 – 16)] ;

LD : nine schools for pupils with learning disabilities and Autistic Spectrum Condition and Speech and Language Needs [4 primary (4 – 11), 1 secondary (9 – 16), 3 secondary (11 – 16), 1 all age (4 – 16)] ; and

HI : two schools for pupils with hearing impairments [1 secondary (11-18); 1 all age (3-16)]. These schools also provide a regional resource for HI pupils.

INDEPENDENT PLACEMENTS

For a minority of children with very specific needs.

This strategy will focus on meeting the demand for special school places. However, the demand for special school places cannot be viewed in isolation.

Other initiatives, arising from SEND Workstreams, will have an impact on the demand for special school places. These co-dependant initiatives are summarised in Appendix 1.

The rising demand for special school places

The County Council has a duty to promote high standards of education, fair access to education and a general duty to secure the sufficiency of school places. In addition, it must consider the need to secure provision for children with SEND, including the duty to respond to parents' representations about school provision. These are referred to as the School Place Planning Duties⁴.



As part of the SEND Strategy 2018-2023, a full review of how Hertfordshire meets the educational needs of children with SEND is underway. This review is looking at how the current offer meets demand now and in the future. While the review is ongoing, evidence gathered has clearly shown that there is a need to re-align some provision to meet both the current and future needs of children in Hertfordshire with SEND.

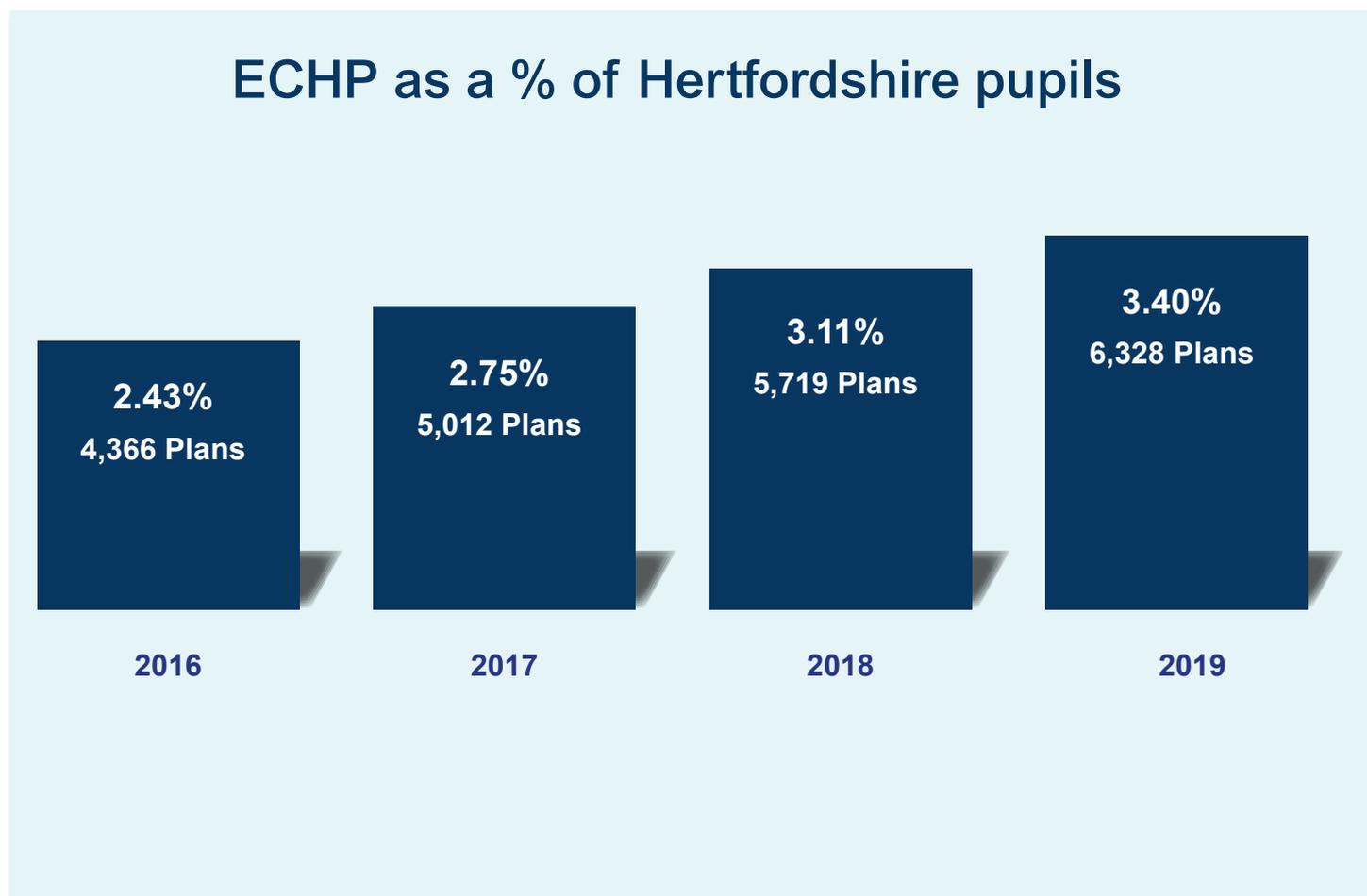
There is a demonstrable need for more special school places to meet some specific needs. Where it is demonstrated that need cannot be met for these children and young people within Hertfordshire, they are increasingly being placed, either by the County Council or as an outcome of a tribunal, at independent placements often far from their home and community. Being educated close to home is clearly desirable as it helps the child to develop independence and social networks that will support them as they prepare for adulthood.

This strategy looks to build the right capacity across Hertfordshire special schools, to meet these specific needs. This additional special school capacity will reduce the reliance on independent placements, ensuring that the educational needs of most Hertfordshire children with SEND can be met locally.

In addition to the need to build capacity so that Hertfordshire can meet specific needs, there has been an increase in the demand for special school places across the county, due to demographic growth.

⁴ School Place Planning Duties (s13-14 Education act 1996)

As outlined in the SEND Strategy 2018-2023, Hertfordshire's 0-19 population is projected to rise by 11.9% between 2017 and 2026. As one would expect, the number of children with SEND will also increase. This increase in the population has already led to increased demand for special school places. The table below shows the increase in the number of Hertfordshire pupils with Educational Health Care Plans (EHCP⁵) since 2016.



In the past two years an additional 233 places have been created in Hertfordshire special schools. However, increased capacity has been unable to meet the rising demand for special school places. This unmet demand has resulted in an increasing number of children being placed at independent provision, in 2019/20 financial year the number of children placed in the independent sector had increased to 220.

In addition some children have been placed in settings that do not best meet their need or are out of education, or on reduced timetables, because their needs cannot be met.

Hertfordshire special schools are now reaching capacity and, as demand continues to rise, new capacity must be built into the system to ensure that we are able to meet the needs of children with EHCPs into the future.

⁵ EHCP - www.hertfordshire.gov.uk/ehcp

Special School Forecasts 2020-2025

The County Council has produced special school forecasts to help understand short-term demand for special school places across Hertfordshire. These forecasts cover a 5 year period and will be updated annually.

They include an assessment of :

- the 3 year rolling average in numbers in a year group from the previous year to provide cohort forecasts moving forward;
- the number of year 6 pupils who will require a secondary special school place; and
- an assessment of additional pupils that may arise from housing growth.

The forecasts do not include any contingency or 'margin'. The County Council would normally plan for a small surplus across an area to allow for fluctuations in forecast demand and to ensure children can secure a local place.

The special school forecasts cannot be viewed in isolation. Short term demand can be more accurately assessed using awaiting placement data held by the County Council. The forecast can, however, help to prioritise medium to longer term strategic projects to ensure that the right capacity is built into the system at the right time to meet forecast need. This work will increasingly need to take account of the growth agenda in Hertfordshire, by meeting the demand for special school places arising from approximately 100,000 new homes planned in the longer term for Hertfordshire, the impact of which will extend beyond the range of the current special school forecast.

Sector analysis of the forecast need for special school places

The following section identifies the forecast for special school places, by sector. It also explores the needs of a specific cohort of children, whose needs will be met through the creation of a new Communication & Autism sector.

The SEND Special School Place Planning Strategy is one of several initiatives arising from the wider SEND Strategy 2018-2023. As previously mentioned, some of these other initiatives will have a bearing on the future demand for special school places. The impact of these initiatives is considered in the following sector strategies.



Severe Learning Difficulties (SLD) & Profound Neurological Impairment (PNI)

Profound Neurological Impairment (PNI)										
School Name	Places Available 2020-21	Actuals			NOR January 2020	Forecast				
		2017-18	2018-19	2019-20		2021-22	2022-23	2023-24	2024-25	2025-26
Lonsdale	95	81	86	104	108					
Meadow Wood	36	27	30	35	33					
Total PNI Demand		108	116	139	141	156	166	177	181	183
Total PNI Places Available	131					131	131	131	131	131
Surplus or Shortage of PNI Places (No.)						-25	-35	-46	-50	-52
Surplus or Shortage of PNI Places (%)						-19.1%	-26.7%	-35.1%	-38.2%	-39.7%

Severe Learning Difficulties (SLD)										
School Name	Places Available 2021-22	Actuals			NOR January 2020	Forecast				
		2017-18	2018-19	2019-20		2021-22	2022-23	2023-24	2024-25	2025-26
Breakspeare	91	76	78	86	85					
Woodfield	120	85	90	96	105					
Watling View	89	90	92	90	91					
Greenside	156	136	142	143	148					
Lakeside	75	67	68	70	70					
Amwell View	144	135	136	139	148					
Total SLD Pupil Demand		589	606	624	647	685	739	786	832	876
Total SLD Places Available	675					675	675	675	675	675
Surplus or Shortage of SLD Places (No.)						-10	-64	-111	-157	-201
Surplus or Shortage of SLD Places (%)						-1.5%	-9.5%	-16.4%	-23.3%	-29.8%

For strategic school place planning, the demand for these two sectors are combined: to understand the demand and potential strategies that could be employed to meet demand across these sectors.

PNI & SLD Combined										
School Name	Places Available 2020-21	Actuals			NOR January 2020	Forecast				
		2017-18	2018-19	2019-20		2021-22	2022-23	2023-24	2024-25	2025-26
Total PNI Demand		108	116	139	141	156	166	177	181	183
Total SLD Pupil Demand		589	606	624	647	685	739	786	832	876
Total PNI & SLD Demand		697	722	763	788	841	905	963	1,013	1,059
Total PNI & SLD Places Available	806					806	806	806	806	806
Surplus or Shortage of PNI & SLD Places (No.)						-35	-99	-157	-207	-253
Surplus or Shortage of PNI & SLD Places (%)						-4.3%	-12.3%	-19.5%	-25.7%	-31.4%

Currently there are six SLD schools across the county offering 675 places. There are two PNI schools offering a further 131 places. In total there are 806 places available across the SLD/ PNI sectors (Appendix 2).

Demand for SLD/PNI places has been rising and continues to do so at a significant rate. In January 2016 there were 697 pupils in these schools. This number had risen to 788 by January 2020, a rise of 13%.



The combined forecast indicates that demand for places from 2021 will exceed capacity and continues to do so for the life of the forecasts. There is a forecast deficit of 253 places by 2025.

This rising demand is partly due to demographic growth. However, medical advances in recent years have also led to more children surviving premature birth with PNI/SLD needs. Similarly, advances in trauma care have led to children surviving serious injuries but with PNI/SLD needs. The increased demand in this sector is consistent with growth seen nationally and the forecast indicates that demand will continue to rise for the life of the forecast.

To date, the County Council has managed the rise in demand in this sector by increasing capacity in existing special schools. In the past two years an additional 79 places have been created at the SLD and PNI schools. From September 2020, all schools in the sectors are at capacity and there is no further expansion potential.

Assessment of other initiatives that may influence demand

- The needs of children with SLD and PNI are mostly evident from birth or before the child starts school. There is little movement from this sector into other sectors or mainstream settings.
- The initiatives to increase the number of children with SEND who can be supported

in mainstream and the introduction of SRPs for children with autism and communication needs is unlikely to significantly affect demand in this sector.

- There is potential that *Early Years SEND* and *Post 16 SEND* and *Preparing for Adulthood* initiatives may free up some limited capacity in this sector. These initiatives are at an early development stage. It is assessed that the impact is likely to be relatively low in comparison to the number of places required in the SLD /PNI sectors.
- The number of independent placements will increase significantly, as all schools in the sector are at capacity.

SLD/PNI strategy

The delivery of additional local SLD/PNI capacity is a clear priority. All schools are now full and there is no further expansion capacity. It is important that new places are delivered appropriately across the county, to ensure equity of provision so that as many children as possible can be placed near to their home and local community.

Considering there is a forecast deficit of 253 places across the life of the forecast, it has been assumed that at least 300 places are required. This will allow for a level of capacity across the schools, ensuring that most children can be placed close to home and to allow for fluctuations in demand during the life of the forecast and beyond.

New SLD/PNI places will be distributed across the county, through the delivery of up to 3 new schools delivering at least 300 new places. These additional places will give children equity of access, wherever they live in the county.

The earliest that new places can be delivered is September 2023. In the interim, an increased number of children may need to be placed at special schools outside of Hertfordshire or at independent placements.

Social Emotional & Mental Health (SEMH)

Social Emotional & Mental Health (SEMH)										
School Name	Places Available	Actuals			NOR January 2020	Forecast				
		2017-18	2018-19	2019-20		2021-22	2022-23	2023-24	2024-25	2025-26
Larwood	86	64	65	75	80					
Brandles	54	48	50	50	54					
Hailey Hall	70	65	64	69	70					
Haywood Grove	56	38	51	50	55					
Batchwood	72	68	72	72	78					
Falconer	85	79	90	86	83					
Total SEMH Demand		362	392	402	420	436	453	467	478	484
Total SEMH Places Available	423					423	423	423	423	423
Surplus or Shortage of SEMH Places (No.)						-13	-30	-44	-55	-61
Surplus or Shortage of SEMH Places (%)						-3.1%	-7.1%	-10.4%	-13.0%	-14.4%

Currently there are six SEMH schools across the county offering 423 places (Appendix 3).

There has been a steady increase in demand across the sector. In January 2016 there were 362 children in SEMH schools. This number had risen to 420 by January 2020, a rise of 16%. To date, the County Council has managed the rise in demand in this sector by using existing capacity in the schools and increasing capacity where needed. An additional 49 places have been created in the past two years.

The forecast indicates that demand for places from 2021 will exceed current capacity and continues to do so for the life of the forecasts. There is a forecast deficit of 61 places by 2025. This does not include the number of pupils who are placed out of county due to our inability to meet their needs currently.

Assessment of other initiatives that may influence demand

The *Behaviour and SEMH Workstream* is conducting a full review of Behaviour and SEMH provision across the county. The outcomes of this review are expected in the summer of 2021. The forecast demand for SEMH places is likely to be volatile going forward, as demand will be affected by a number of other initiatives.

- A recommendation from the Specialist Provision workstream, to develop Specialist Resourced Provision (SRP) in mainstream schools, would create up to 176 places to support children with communication needs, including autism. It is expected that some children, who would have been placed in an SEMH school, would have their needs better met in an SRP at a mainstream school, potentially reducing the future demand for SEMH places.
- Other recommendations arising from the Specialist Provision workstream aim to increase the support for children with SEND in mainstream schools. Any increase in the number of children remaining in mainstream would reduce the demand for SEMH places across the county.
- A review of the SEMH residential offer is underway. The outcomes of this review have an impact on the number of day places available.
- A new SEMH secondary school in Harlow is scheduled to open in 2022. This will reduce the current inflow to Hailey Hall SEMH school from Essex, freeing up SEMH places for Hertfordshire children in the east of the county.

- A new 60 place special school, for secondary aged children with Communication & Autism needs, is scheduled to open in Welwyn Garden City in September 2022. This school will meet the needs of a specific cohort of pupils. Due to the current lack of provision for children with these needs, some of the children have been placed in SEMH schools but their needs would be better met at the new school. Once this school opens some capacity will be freed up in the SEMH secondary schools.
- A new 60 place special school, for primary aged children with Communication & Autism needs, is planned for in this strategy. This school would mirror the designation of the secondary school above. Should this school open, some capacity would be freed up in the SEMH primary schools.

SEMH strategy

Any medium to long term strategic decisions to address the forecast shortage of places in this sector will be taken once the recommendations of the Behaviour and SEMH review are known in 2021. The recommendations will be incorporated into the next version of this strategy.

In the meantime, short term demand (2021 and 2022) will be closely monitored and the County Council will be working closely with special schools, specialist and alternative settings and mainstream schools to ensure that the short-term needs reflected in the forecast can be met locally wherever possible.



Learning Difficulties (LD)

Learning Difficulties (LD)										
School Name	Places Available 2021-22	Actuals			NOR January 2020	Forecast				
		2017-18	2018-19	2019-20		2021-22	2022-23	2023-24	2024-25	2025-26
Woolgrove	125	125	125	125	124					
The Valley	150	120	133	142	153					
Middleton	90	86	88	93	95					
Pinewood	160	157	162	162	168					
Southfield	80	73	80	80	80					
St Lukes	160	105	121	149	160					
The Collett	128	126	128	127	127					
Colnbrook	110	100	101	101	99					
Garston Manor	140	131	139	143	141					
Total LD Demand		1,023	1,077	1,122	1,147	1,173	1,180	1,178	1,163	1,152
Total LD Places Available	1,143					1,143	1,143	1,143	1,143	1,143
Surplus or Shortage of LD Places (No.)						-30	-37	-35	-20	-9
Surplus or Shortage of LD Places (%)						-2.6%	-3.2%	-3.1%	-1.7%	-0.8%

Currently there are nine LD schools across the county offering 1,143 places (Appendix 4). There has been a steady increase in the number of pupils in LD schools in Hertfordshire. In January 2016 there were 1,023 children in LD schools. This number had risen to 1,147 by January 2020, a rise of 12%.

To date, the County Council has managed the rise in demand in this sector by using existing spare capacity in the schools and increasing capacity where needed. In the past two years an additional 102 places have been created in the LD sector.

The forecast indicates that demand for places from 2021 will exceed current capacity. Forecast demand peaks in 2022 at 35 places above capacity and then drops to show a close match between existing capacity and forecast demand.

Assessment of other initiatives that may influence demand

The actual demand for LD places is likely to be volatile going forward as demand will be affected by other initiatives.

- As with the SEMH sector, it is expected that some children who would have been placed

in an LD school would have their needs better met in an SRP at a mainstream school, thereby reducing the demand for LD places.

- As with the SEMH sector, any increase in the number of children with SEND being supported to remain in mainstream would also reduce the demand for LD places across the county.

LD strategy

It will be necessary to maintain and marginally increase capacity in LD special schools. Short term demand (2021 and 2022) will be closely monitored and the County Council will be working closely with special schools, specialist and alternative provisions and mainstream schools, to ensure that the short-term needs of children can be met locally wherever possible.

The planned rebuild of The Valley school will create an additional 15 secondary places in the LD sector from January 2023. This will increase capacity across the sector to 1,158. There would then be a close match between forecast demand and capacity for the life of the forecast, a forecast deficit of under 2% for the remainder of the forecast.

Hearing Impairment (HI)

Hearing Impairment (HI)										
School Name	Places Available 2021-22	Actuals			NOR January 2020	Forecast				
		2017-18	2018-19	2019-20		2021-22	2022-23	2023-24	2024-25	2025-26
Knightsfield	46	39	37	44	46					
Heathlands	110	102	97	109	113					
Total HI Demand		141	134	153	159	158	170	180	188	183
Total HI Places Available	156					156	156	156	156	156
Surplus or Shortage of HI Places (No.)						-2	-14	-24	-32	-27
Surplus or Shortage of HI Places (%)						-1.3%	-9.0%	-15.4%	-20.5%	-17.3%

The two schools in this sector admit significant numbers of pupils from other authorities: around a third at Knightsfield and over half at Heathlands (Appendix 5).

Both schools are at capacity and the forecast indicates a gradual rise in demand to 2024 and then a slight reduction from 2025. An additional 3 places have been created in the past 2 years.

Assessment of other initiatives that may influence demand

Due to the very specific needs of this cohort, it is unlikely that the other factors will have an impact on demand for HI places. It is, however, possible that the changes to funding for mainstream schools to support children with SEND may see demand for HI places reduce but any drop is likely to be minimal.

Due to the low numbers in the HI cohort it is possible that actual demand will vary considerably to the forecast demand. For example, the impact of pupils arising from housing growth may not impact on this sector as forecast.

HI strategy

The number of places forecast for 2021 is around the level of current capacity. With a slight deficit forecast at Knightsfield. Placement data will be closely monitored to identify actual short-term demand for 2021 and 2022.

The forecast will be monitored and the County Council will work closely with both schools to agree contingency plans, should additional places be required for Hertfordshire children in the short or medium term.



Communication & Autism - children whose needs fall between existing special school sectors (CA)

The County Council needs to respond to an increasing number of children with a specific need profile that can be described as including :

- Autism and/or social communication needs (diagnosed or otherwise)
- Academically able – working at age related expectations (ARE), above ARE or below ARE due to difficulties in accessing learning or gaps in education (not those with SEN recognised as Learning Difficulties)
- High levels of anxiety
- Mental health needs
- Sensory needs

These children are not included in the special school forecasts currently. However, Analysis of current pupil placement data indicates a significant and increasing demand for places to meet this specific need.

These children have often experienced trauma and show behaviour that is challenging. This behaviour inhibits their ability to access the curriculum and make good progress. These pupils may experience multiple exclusions from mainstream and specialist settings.

As, it is a priority of the SEND Strategy 2018-2023 to reduce the reliance upon the independent sector, by creating high quality provision close to the child's home and local community, the County Council has started to take action to meet the needs of this group of children.

A new 60 place special school, for secondary aged children with Communication & Autism needs, is scheduled to open in Welwyn Garden City, in phases from September 2022.

This new school will support children with this need profile.

Assessment of the demand for a primary special school for children with Communication & Autism needs

There are currently 15 primary age children in independent placements whose EHCPs indicate they meet this need profile.

There are also several children in Hertfordshire's primary SEMH schools whose SEMH needs stem from their autism and associated sensory needs/difficulties in accessing learning. Many of them experience difficulties in emotional regulation, which can manifest as behaviours which led to placement in SEMH settings. These children would benefit from attending a setting which is better suited to their underlying needs. It is estimated that there are at least 9 children in Haywood Grove School who would fall into this category and a further 10 children at Larwood School.

There are currently 3 primary age children receiving home tuition (through ESMA), as they are unable to attend school due their autism-related anxiety which has led to long-term school absence. They would benefit from a smaller school setting, which is equipped to support their anxiety and mental health needs. Often children who have reached this stage are unable to return to mainstream school resulting in children being placed at independent placements.

As demonstrated above, there are currently at least 37 children who meet the identified need profile.

In addition to these 37 children, there will be other children with this specific need in the following categories:

- children awaiting placement in specialist out of county placements
- those currently seeking independent placements
- those who are not attending school due to autism-related anxiety, but who do not meet the criteria for ESMA tuition (e.g. When CAMHS support is not in place/available)
- those in a mainstream or special school whose needs could be better met in a more suitable specialist school or setting
- children missing from education (CME)
- children who are currently Educated at Home (EHE) as parents feel that there is not a suitable school provision available locally
- children who have 'coped' in primary school with significant levels of intervention & support but are anticipated to struggle when reaching secondary school. Many of them may have benefitted from early intervention support in a specialist setting, either as a long-term placement or to better-prepare them for a mainstream secondary setting.

Many of the children in the categories above are supported through personalised educational support packages, funded 1:1 support and/or social care packages.

New Communication & Autism sector - for children whose needs fall between special school sectors – Strategy

As demonstrated above, there is a need to provide accessible primary special school places in Hertfordshire to meet the needs of these children. These places will form part of a new special school sector.

A planned new Communication & Autism special school in Welwyn Garden City will offer 60 places for secondary aged pupils. The earliest the phased opening of the school could be delivered is September 2022.

A second new Communication & Autism special school, which will be easily accessible from across the county, is now proposed. This school, which will be easily accessible from across the county, is now proposed. This special school will offer 60 places for primary aged pupils. The earliest the phased opening of the school could be delivered is September 2023.



SEND Special School Place Planning Priorities 2020-2023

As evidenced in this strategy, all Hertfordshire special schools are reaching capacity and demand for places continues to rise. Demand for special school places is forecast to rise by 364 places between January 2020 and January 2025.

While other initiatives are likely to have an impact on that demand it is clear that new capacity must be built into the system, particularly in some sectors, to ensure that Hertfordshire can continue to meet need locally now and into the future.

The proposals in this SEND Special School Place Strategy 2020-23 are informed by evidence-based analysis of need and demography which has identified the capacity needed now and in the future.

The recommendations in this strategy will improve the outcomes of children with SEND, building capacity to meet local need and achieving best value for money.

They are:

1 : Building capacity in SLD/PNI sectors

It is clear that there is sustained pressure for places in the SLD/PNI sectors, 229 places at SLD and a further 42 at PNI. This equates to 75% of the overall increase in demand. 300 new SLD/PNI places are needed to ensure that forecast demand can be met in Hertfordshire : with approximately 200 places planned for delivery by September 2023.

2. Maintaining and marginally increasing places in the LD sector:

Places in this sector will be maintained and marginally increase places via the planned rebuilding of The Valley Special School, Stevenage, with 15 additional places, from January 2023.

3. Ensuring that short-term demand for special school places is met locally wherever possible :

Working with special schools, specialist and alternative provision and mainstream schools, the County Council will develop contingencies to ensure that there are sufficient local places to meet need in the short term, as other initiatives that will affect demand are embedded.

4. Delivery of two new Communication & Autism schools to meet the needs of children whose needs fall between current special school sectors

It is a priority to focus on meeting the needs of children with autism (ASC), or a social communication difficulty, who have higher academic ability, but significant anxiety, mental health issues, and gaps in their education and associated underachievement. The needs of these children will be met through the development of :

- a new approved 60 place secondary special school in Welwyn Garden City, phased opening from 2022 at the earliest; and
- the provision of a new 60 place primary special school in the centre of the county, phased opening from 2023 at the earliest.

Appendix 1

Other factors that may have an impact on the demand for special school places
The development of the SEND Pupil Place Planning Strategy is one of many initiatives commissioned by the SEND Senior Leadership Group, through its various Workstreams.

Some of these initiatives are listed here :

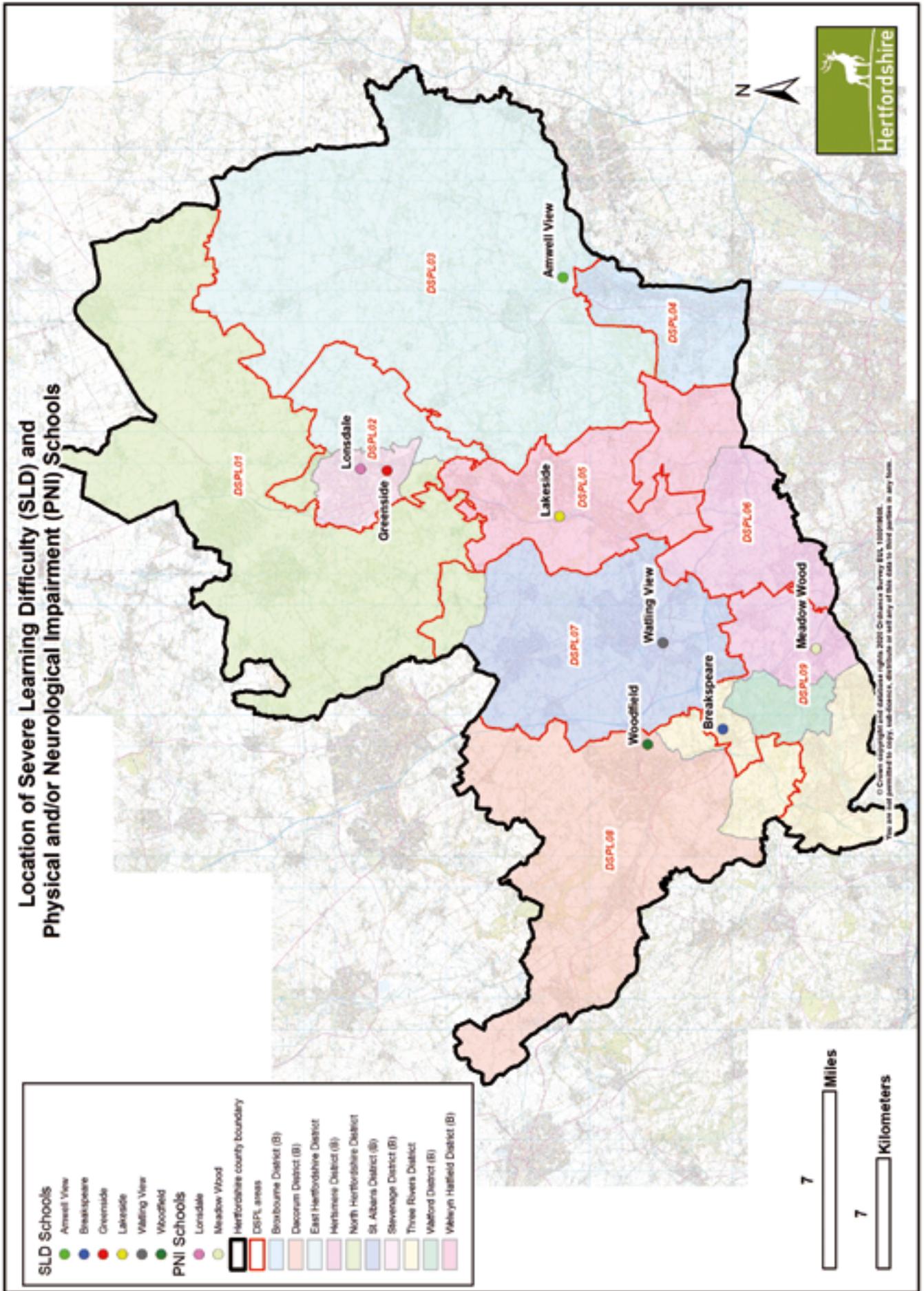
UNIVERSAL

- Further development of the universal offer in mainstream through Whole School SEND programme
- Changes to school funding through High Needs Funding in Mainstream Schools
- Development of banding descriptors

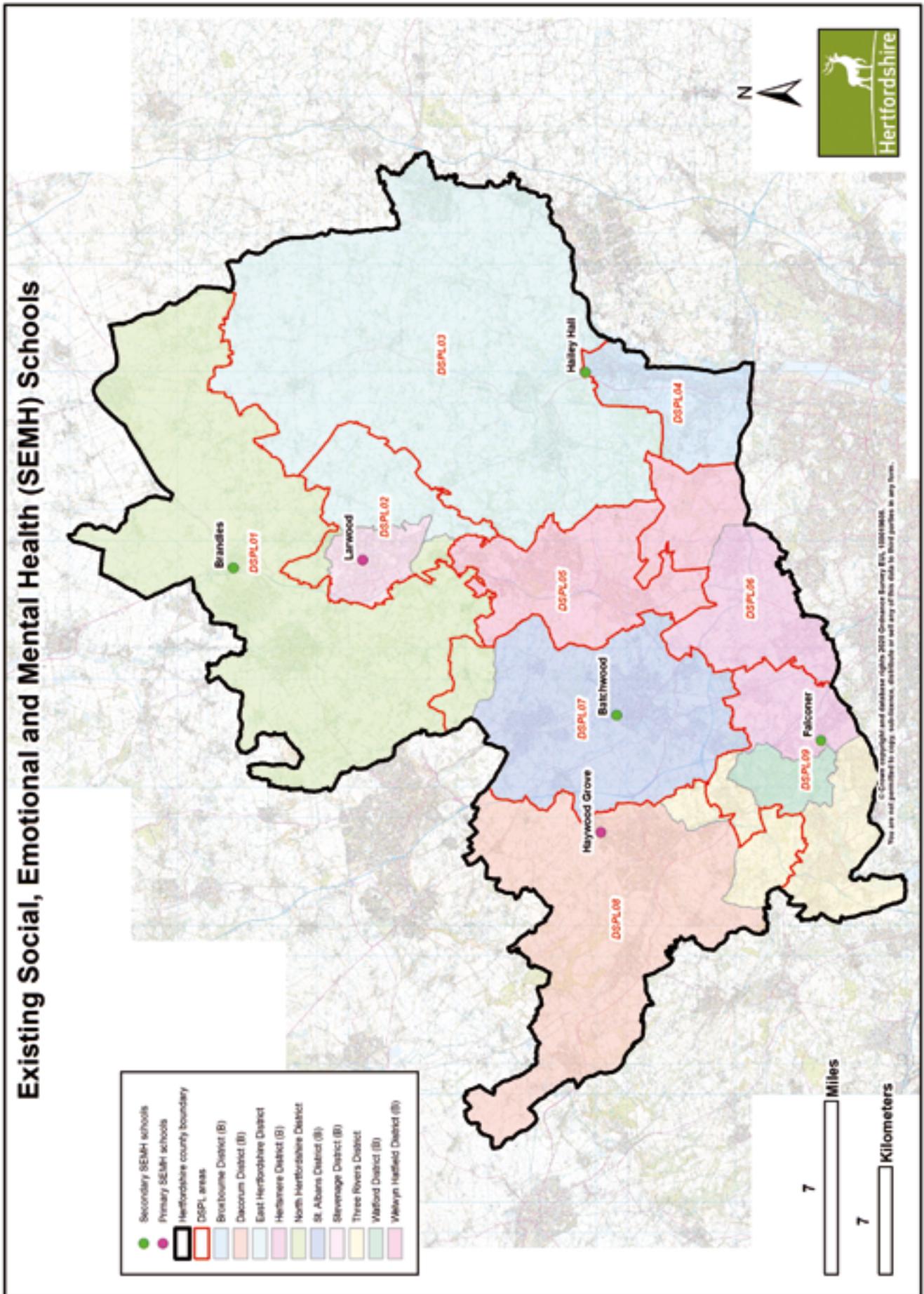
SPECIALIST PLUS (including special school initiatives)

- Development of Specialist Resource Provision in mainstream schools for children with communication needs
- SEMH & Behaviour review
- Review of SEMH residential offer
- Specialist nursery schools for children with SEND who are unable to access universal offer
- New schools planned for children whose needs currently fall between special school sectors
- Increasing the number of children who can access a local special school place and reducing the number of out of county independent placements
- Preparing For Adulthood - strategies including developing the Post 16 college offer for young people with SEND
- Children Looked After residential strategy
- Cross border activity – new schools and other strategies in other areas that may impact on inflows and outflows to HCC special schools

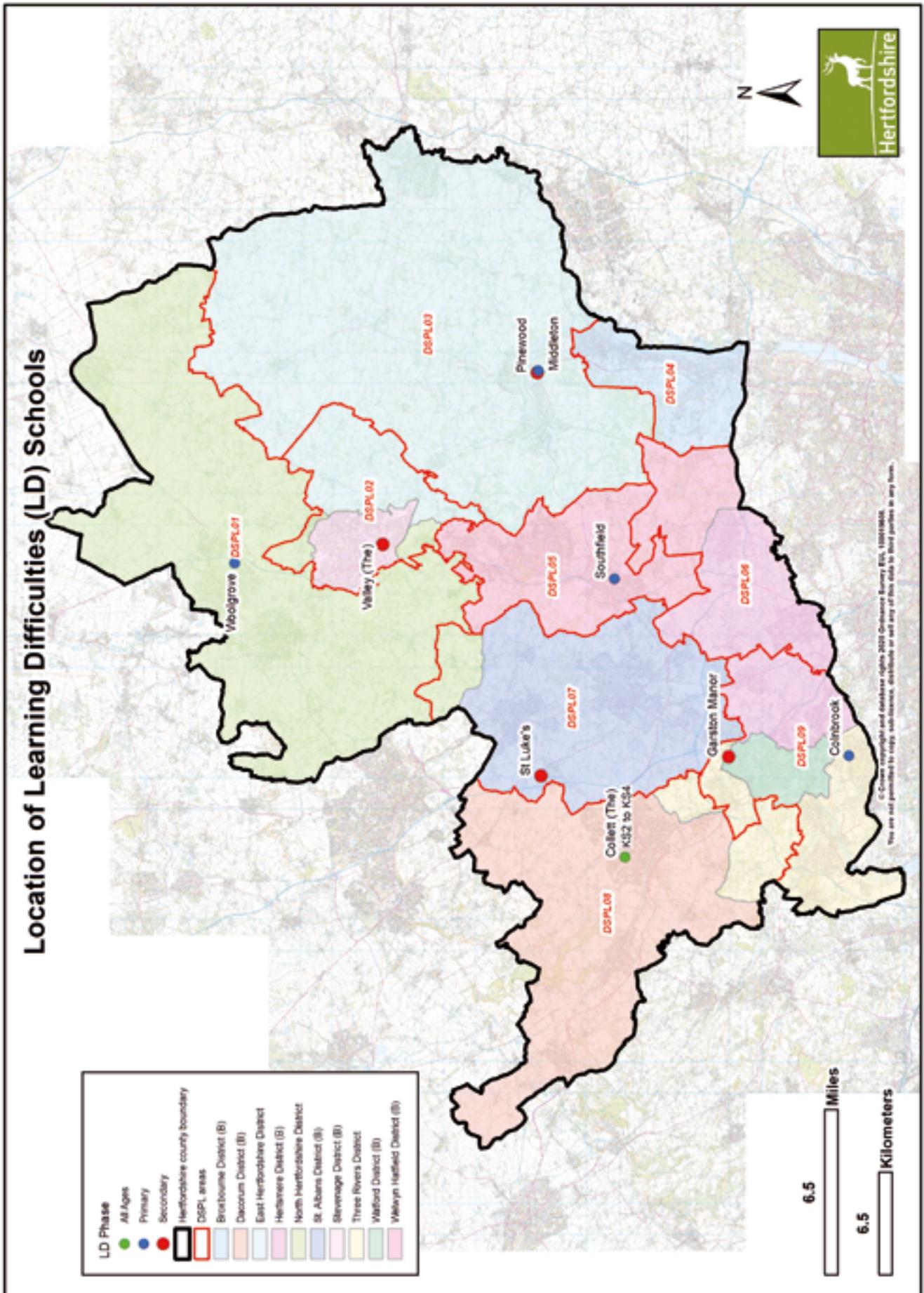
Appendix 2 : SLD/PNI



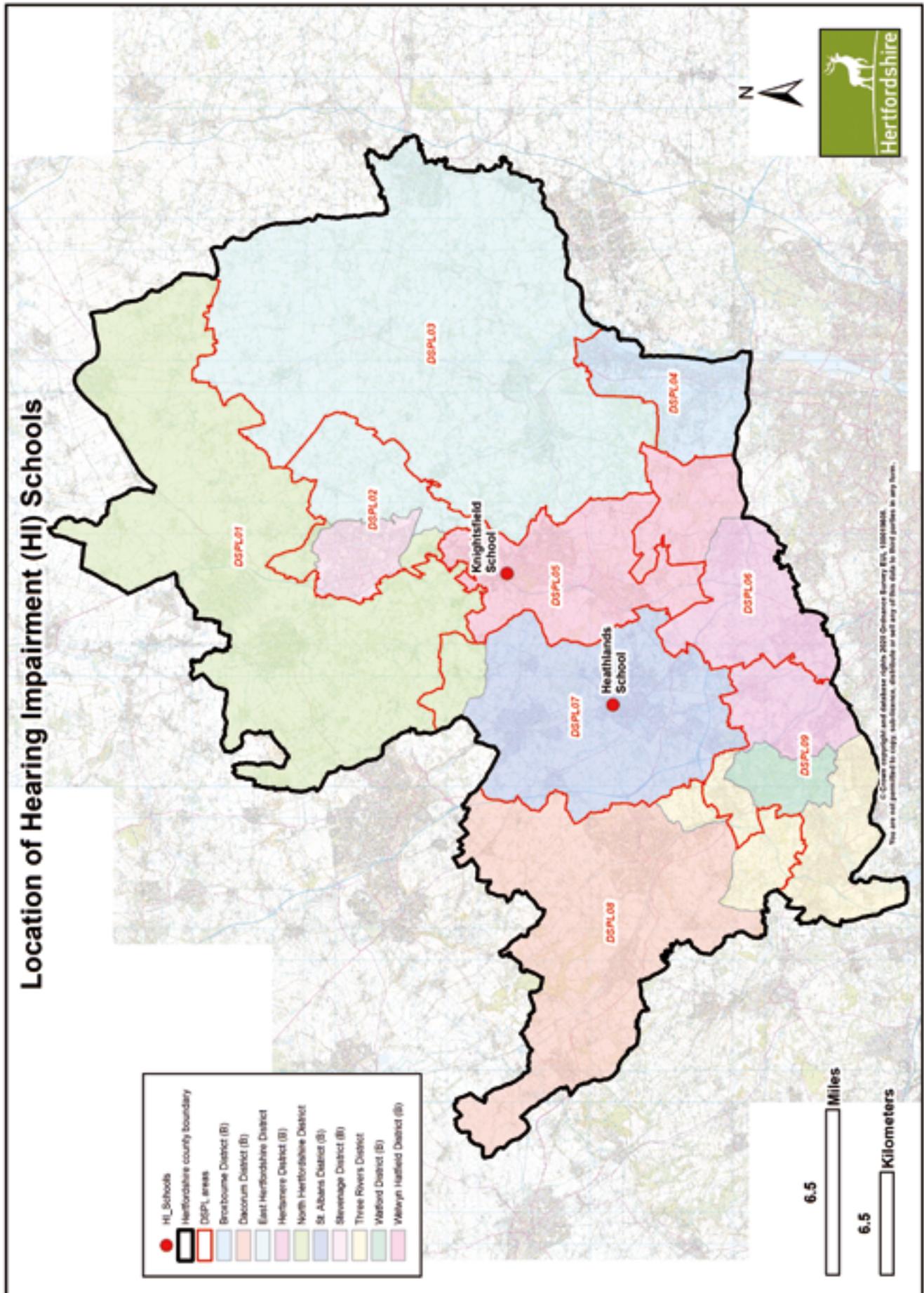
Appendix 3 : SEMH



Appendix 4 : LD



Appendix 5 : HI



Technical Appendix 4: Education – Special Schools and Specialist Provision

1.0 Service overview

1.1 The county council has a duty to promote high standards of education, fair access to education and a general duty to secure the sufficiency of school places. It must consider the need to secure provision for children with Special Educational Needs and Disabilities, including the duty to respond to parents' representations about school provision.

1.2 Special Educational Needs and Disabilities (SEND)

A child or young person has SEN if they have a learning difficulty or disability which calls for special educational provision to be made for him or her.

A child or young person has a learning difficulty or disability if he or she:

- Has a significantly greater difficulty in learning than the majority of others of the same age, or*
- Has a disability which prevents or hinders him or her from making use of the facilities of a kind generally provided for others of the same age in mainstream schools or mainstream post 16 provisions*
- For children aged 2 or more, special educational provision is educational provision that is additional to or different from that made generally for other children or young people of the same age by mainstream schools, maintained nursery schools, mainstream post 16 institutions or be relevant early years providers. For a child under 2 years of age, special educational provision means educational provision of any kind.*

SEND Code of Practice (2015)

1.3 There are four broad areas of SEND, although many children and young people have needs that cut across more than one of the following areas of need:

- Communication and interaction
- Cognition and Learning
- Social, Emotional and Mental Health Difficulties
- Sensory and/or physical needs

1.4 Children in Hertfordshire with SEND have their needs met within a range of inclusive provision. The majority of children will be accommodated within mainstream schools with additional support. However, some children will need intensive support in a smaller environment and will be supported at specialist provision including for example specialist resource provision (SRP),

Alternative Provision (AP), Education Support Centres (ESCs) and Primary Support Bases (PSBs). Others will need a special school place.

- 1.5 More information on the county council's SEND strategy can be found on our website at: www.hertfordshire.gov.uk/SEND

2.0 Assessing need and calculating contributions

- 2.1 Hertfordshire has developed a short-term forecasting methodology for special schools based on historical analysis of placements and demand. Where it can be demonstrated that existing capacity is unable to mitigate the impact of development, the county council will seek to secure obligations to create additional provision, whether through the expansion of existing or the creation of new provision.
- 2.2 Department for Education (DfE) guidance¹ states that it is reasonable and fair to seek developer contributions for SEND provision in direct proportion to the needs arising from a housing development related to pupils requiring provision in a special school, a specialist provision in a mainstream school, an ESC or other alternative provision.
- 2.3 The potential SEND pupil yield from an individual development site is assessed using a SEND education model, which projects the average number of children needing specialist provision that may emerge from different types of dwellings over time. This provides an assessment of the planning obligations necessary to mitigate the impact of a development site. The model is based on observed yields from recent new developments in Hertfordshire, which have been assessed as part of emerging data from a detailed Pupil Yield Study² (PYS).
- 2.4 The SEND education model does not include potential pupil yield from those SEND pupils who are expected to be accommodated within a mainstream school with additional support. An allowance for these pupils is included in the pupil yield calculations for, and contributions sought towards, mainstream education.

Per-Place Cost Calculations

- 2.5 In line with DfE guidance, the cost of SEND specialist provision places are, for the majority of projects, four times the national average cost for the relevant phase (i.e. primary or secondary) published by the DfE in the local authority school place scorecards, regionally adjusted for Hertfordshire. Nursery places are sought at the same per-place cost as primary places, while contributions towards 16-19 provision are sought at the same rate as secondary places.
- 2.6 These per-place costs are combined with development-specific pupil projections from the model, to ensure that obligations sought are fair and reasonable, based on the number and type of units on an individual site. However, where it can be evidenced that the cost to deliver the project is in excess of funds to be achieved through the application of these charges (such as might be the case for projects with abnormal costs due to planning, highways or construction limitations), then the full cost of providing the new school or expanding the existing school and/or purchasing additional land to do so may be sought from the developer.

Indicative Education Contributions

¹ DfE - Securing developer contributions for education (April 2019)

² Further information regarding the PYS is available on the county council's website.

- 2.7 The following tables show indicative contributions for a new build project, by dwelling type³, which might be sought from development sites.

Indicative Cost Tables by Phase of Education

SEND: Primary

	HOUSES				FLATS			
	1 bed	2 bed	3 bed	4+ bed	1 bed	2 bed	3 bed	4+ bed
	All Tenures							
County	£565	£565	£565	£565	£168	£168	£168	£168

SEND: Secondary

	HOUSES				FLATS			
	1 bed	2 bed	3 bed	4+ bed	1 bed	2 bed	3 bed	4+ bed
	All Tenures							
County	£653	£653	£653	£653	£58	£58	£58	£58

- 2.8 All costs shown above are based on 1Q2020 BCIS prices.
- 2.9 The illustrative tables above are included as a guide to help inform viability assessments and financial planning; the actual contribution for each development site will be calculated individually once a planning application has been made. This ensures the amount sought is fair, proportional and aligned with the impact of the specific development.
- 2.10 Both tables shown above relate only to construction⁴ costs and do not make any allowances for purchasing land. Where additional land is required to allow the delivery of a SEND project, the cost (or the relevant proportion of the cost) of acquiring the land will be added to the pupil place-led costs illustrated in the tables above. The tables are based on the cost of providing a new school. Contributions sought towards expansion of existing schools may be lower. Conversely, where abnormal site features or design requirements for a particular project mean that the cost of mitigating development is higher than standard, the amount charged may be increased proportionally.

3.0 Assigning contributions towards projects

- 3.1 Due the specialist nature of Hertfordshire Special Schools and Specialist Provision and the need for them to be of sufficient size to efficiently deliver a broad and specialist personalised curriculum, they draw pupils from beyond their immediate locality. The Department for Education's guidance sets out that travel distances to

³ The indicative costs are not currently weighted according to different tenures and bed-sizes. However, once the PYS is complete this information will be incorporated into the cost table.

⁴ Construction costs include fit out, furniture and equipment and ICT.

special schools and specialist provision should not affect consideration of whether a planning obligation meets the legal tests.

- 3.2 The potential SEND pupil yield for a particular development is not required to be disaggregated between different categories of complex need. The county council may therefore seek to apply the full SEND contribution from a particular development to a single SEND project covering the relevant age range. However, in some cases flexibility will be sought to allow contributions to be appropriately directed to a range of SEND projects.

Technical Appendix 2: Education (Early Years)

1.0 Service Overview

1.1 The county council currently has a number of statutory duties it has to meet regarding free early education (FEE) and childcare:

- Free early education for 2 year olds:
Parents who meet national criteria as set by central government are entitled to fifteen hours of free early education. The aim of this scheme is to narrow the gap for the most disadvantaged families.
- Free early education for 3 and 4 year olds:
All children from the term after they are three until they start reception are entitled to fifteen hours of free early education
- Thirty hours free childcare for 3 and 4 year olds:
Working parents who meet a national criteria as set by central government are entitled to an additional fifteen hours of free childcare in addition to the fifteen hours of free early education.
- All working families with children up to the age of 14 (18 for children with special education needs and disability) can expect the local authority to ensure there are sufficient childcare places available for their children to ensure they are able to continue to work.

The various providers falling under Early Years Education are described below. In some instances it is possible that the same facility can provide more than one service.

- 1.2 Nursery provision (Free Early Education) is a central government funded scheme whereby all children from the term after which they are three until they reach school age are eligible for a free place for 570 hours per year. This free place can be offered in a maintained school or in a PVI provision, such as a preschool or day nursery. Where new primary school sites are identified, nursery provision will be sought as part of the on-site provision. The county council has a statutory responsibility to provide 15 hours early education to eligible 2 year old children across Hertfordshire.
- 1.3 Maintained Nursery Schools are schools funded by the state where children aged from two until they reach statutory school age receive their FEE entitlement. There are 14 such schools in Hertfordshire. Maintained Nursery Classes are classes based in primary schools where children aged from two until they reach statutory school age receive their free early education entitlement.
- 1.4 Preschool/playgroups educate children between the ages of 2 and statutory school age. These settings are able to offer FEE to eligible 2 year olds as well as all 3 and 4 year olds. They are run by PVI providers in local communities and some children attending will be accessing their FEE place and others will be accessing additional services for which parents pay. These settings will often be set up in community buildings or schools and will usually be open term time only.

- 1.5 Day nurseries offer childcare and early education for children from 0 to 5 years old. These settings are used predominately by working parents for childcare purposes. They can also offer FEE for eligible children but with most children accessing additional services for which parents pay.
- 1.6 As well as nursery (FEE) provision the county council has a statutory duty to ensure there is sufficient childcare for working parents. This duty covers 0 to 14 year olds (19 years for children with SEND¹). Childcare can take place in preschools; day nurseries; childminders; and out of school provision, such as holiday clubs and after school clubs, depending on the age of the child. It can therefore take place in school or community buildings. New schools should be designed to be able to offer childcare to all children (aged two years upwards).

2.0 Assessing need and calculating demand

- 2.1 Annually Hertfordshire County Council publishes a Childcare Sufficiency Report which details where places are required across the county. It should be noted that unfilled places at one type of provider cannot be taken as evidence that provision in an area is sufficient. The work patterns and incomes of parents are all different and so are their needs.
- 2.2 In addition to working with maintained schools, the county council can work with the private, voluntary and independent (PVI) sector to ensure sufficient childcare and free early education places. All registered childcare providers who care for children from birth to five years old have to comply with the Early Years Foundation Stage and are registered with Ofsted.
- 2.3 Planning obligations towards Early Years Education services are assessed using the Hertfordshire County Council Demographic Model which forecasts the number of children likely to emerge from different types, sizes and tenures of dwellings. An overview of the model is available alongside this Guide.
- 2.4 Planning obligations will be determined on a case by case basis and may take the form of on-site provision (including build costs and land), subject to procurement and competition rules. In these instances the facility must adhere to an Ofsted compliant specification provided by Hertfordshire County Council and any tenant, and their business model, must also be approved.
- 2.5 Where a new primary or first school is proposed as part of a development site, nursery provision will be sought as part of that school.
- 2.6 Following advice outlined within the Department for Education (DfE) guide '[Securing developer contributions for education](#)' (April 2019), Hertfordshire County Council will seek nursery provision commensurate with the cost of primary school provision as shown within the DfE Scorecard. At October 2020, these costs were £20,508 per place for new settings.
- 2.7 In circumstances where it can be evidenced that the cost to expand or redevelop a site is in excess of the DfE Scorecard funds to be achieved through the application of these charges, such as might be the case for sites located in conservation areas, on

¹ Special Educational Needs and Disabilities.

constrained sites, or sites with other planning limitations e.g. located on a flood plain, then a proportionate bespoke cost of providing the new site or expanding the existing site and/or purchasing additional land to do so may be sought from the developer.

- 2.8 See Technical Appendix 3 for nursery contribution calculations which are calculated in accordance with the DfE Scorecard.
- 2.9 Childcare projects vary significantly by location and promoter. The methodology for childcare projects results from space standards from the Department for Education as follows:

Table 1 - Build costs for childcare projects

Age group	m ² per place	£ per place
For children under 2 years old	3.5	£9,625
For children aged 2	2.5	£6,875

- 2.9 Build costs are £2,750 per m² based on BCIS 1Q2019. This produces an average build cost rate of £8,250 ((£9,625+£6,875)/2) per place.
- 2.10 Based on previously supported projects, typical equipment costs average £10,000 for 10 places which produces an average of £1,000 per place.
- 2.11 In total the cost per place is £9,250. Using the Hertfordshire Development Model, the following table indicates costs which might likely be sought from an application for childcare for 0 to 2 year olds:

HOUSES				FLATS			
1 bed	2 bed	3 bed	4+ bed	1 bed	2 bed	3 bed	4+ bed
£403	£1,353	£1,990	£2,125	£493	£1,475	£1,315	£1,574

Technical Appendix 5: YC Hertfordshire

1.0 Service Overview

- 1.2 The Education and Inspections Act 2006, Part 1, Section 6: Education Act 1996, Section 507B is the legislation which guides the Local Authority (LA). It states LAs have a *“responsibility to ensure young people have access to sufficient educational leisure-time activities which are for the improvement of their well-being and personal and social development, and sufficient facilities for such activities; that activities are publicised; and that young people are placed at the heart of decision making regarding the youth work / positive activity provision.”*
- 1.3 To clarify the Government’s expectations of LAs the Department of Education published the ‘Statutory Guidance for Local Authorities on Services and Activities to Improve Young People’s Well-Being (June 2012)’. The guidance states LAs should provide *“young people with the positive, preventative and early help they need to improve their well-being”, “Youth work and youth workers can contribute to meeting the needs of the young people and reduce demand for more specialist services”* and highlights the importance of personal and social development which enables young people to *“build the capabilities they need for learning, work and the transition to adulthood.*
- 1.4 YC Hertfordshire provides youth work projects and programmes, information, advice, guidance, work-related learning, outdoor education and one-to-one support for young people up to the age of 19 and up to 25 for identified vulnerable young adults including those with learning disabilities.
- 1.5 YC Hertfordshire supports young people by providing high quality informal education opportunities to promote their personal and social development, enabling them to make informed decisions; have a place in their community; and ultimately, to reach their potential and make a successful transition to adulthood. This enables young people to:
- Make good decisions based on the information which is available to them, thereby avoiding risky behaviour;
 - Be confident that they can present their views including those of others and influence decisions;
 - Develop resilience by knowing how they can help themselves and others;
 - Recognise when they need support and where they can go to access it;
 - Be able to recognise and develop healthy relationships thereby being less vulnerable to criminal exploitation; and
 - Develop a sense of purpose and self-belief and recognise what they contribute to society thus ensuring a sense of emotional wellbeing and positive mental health.
- 1.6 All YC Hertfordshire youth work is delivered through planned curriculum programmes which are based on identified need resulting in recordable personal and social development outcomes. Needs are identified in a variety of ways: through an ongoing planning and evaluation process; ongoing consultation with young people;

discussions with partners, Elected Members and district/ borough Youth Strategy Groups. Outcomes are identified, and a programme of work designed and delivered.

- 1.7 Delivery can be through a variety of media, depending on the needs and interests of the young people, such as sports, music, drama, art, peer mentoring, outdoor education etc. Outcomes are identified and will be linked to at least one of the curriculum areas: substance misuse, smoking, alcohol, sexual health, relationships, emotional wellbeing, child sexual exploitation, youth engagement, preparation for education, training or work, youth crime and personal safety, equality, diversity and culture, health and fitness, resilience, exploring identity, and independent living skills.
- 1.8 YC Hertfordshire adopts a targeted approach to those most vulnerable and those at risk, while engaging as many young people from the wider community as possible in the informal education and prevention agenda. Any additional users resulting from new development will increase the pressure on facilities within the county, thereby limiting service provision and affecting their usability and attractiveness to young people.

2.0 Assessing need and calculating demand

- 2.1 In order to ensure young people have access to high quality youth work projects where they can learn a variety of skills, ideally all main young people's centres should have the following resources:
- Large multi-purpose room that can be used for sports, drama and events.
 - A medium size meeting room that can be used to deliver specific training and group work sessions.
 - A medium size room in order to deliver art and be a creative space.
 - A couple of small one-to-one rooms for counselling, confidential conversations and to deliver provision such as condom distribution.
 - Life skills training kitchen where young people can learn independent living skills.
 - IT suite where young people can complete CVs, find out information, utilise more specialist media packages etc.
 - An informal area where young people feel relaxed and comfortable so that they can share their concerns.
 - For the larger centres the possibility for a music and media suite.
- 2.2 Given the varied nature of the premises in which YC Hertfordshire operates, centres evolve over time. This enables YC Hertfordshire to develop projects using a step-wise approach based on the identified needs of the young people.
- 2.3 YC Hertfordshire also offers Access Points where possible, to provide information, advice and guidance on a range of subjects. Detached and Outreach work is also a valued mode of delivery of services, where members of the team go and work with young people in areas where they congregate within the community. Specialist projects may also evolve where there is an interest.
- 2.4 Planning obligations towards youth services are assessed using the Hertfordshire County Council Demographic Model which forecasts the number of people able to

access youth services likely to emerge from different types, sizes and tenures of dwellings. Details are available alongside this Guide.

- 2.5 Growth in the number of young people aged 11 to 19 years (the core age group) in a community will require increased resources to enable equal access to those activities. This could take the form of new equipment and/or learning materials and/or improvements to the property to accommodate more young people or offer a wider range of activities.
- 2.6 Additional staff will be required to manage these activities and to maintain a safe and proportionate staff-to-young-people ratio. Start-up funding for the first two years allows the County Council the opportunity to develop working relationships with local partners and to develop strategies to sustain and ensure the future life of projects.
- 2.7 Examples of the resource requirements for increases in demand are currently:
- Increase of 10 to 15 young people - £4,400 per project pa for start-up costs - based on 1 additional member of staff to support current activities for 1 session per week, all year.
 - Increase of 15+ young people - £17,400 per project pa for start-up costs - based on 4 additional staff offering 1 new session per week, all year.
- 2.8 Taking the lower figure, this means that the funding required to cover staffing costs per user per annum equates to £293 (based on £4,400/15) and accordingly staffing costs to cover the 2-year set up period would be £586 (£293 x 2) per additional user.
- 2.9 The Pioneer Young People’s Centre proposal in St Albans is used as a model of future youth provision in Hertfordshire. The intention is to provide a substantial centre of 1,480m², offering a range of activities and serving 11,040 potential users. The centre may be supplemented with detached or mobile provision at a later date. For this, new build costs are expected to be £2,818 per m². This equates to spending £377.78 per person. Thus, a new build with start-up staffing costs: £377.78 + £586 = £963.78 per user.
- 2.10 In circumstances where it can be evidenced that the cost to expand or redevelop a site is in excess of S106 funds to be achieved through the application of these charges, such as might be the case for sites located on brownfield sites, on constrained sites, or sites with planning limitations e.g. located on a flood plain, then a proportionate bespoke cost of providing the new site or expanding the existing site and/or purchasing additional land to do so may be sought from the developer.
- 2.11 An indication of estimated costs is provided in the tables below.

Project to increase resource requirements (£586 per user):

HOUSES				FLATS			
1 bed	2 bed	3 bed	4+ bed	1 bed	2 bed	3 bed	4+ bed
£71	£228	£341	£381	£85	£258	£246	£268

Project to provide an expanded or new centre (£963.78 per user):

HOUSES				FLATS			
1 bed	2 bed	3 bed	4+ bed	1 bed	2 bed	3 bed	4+ bed
£117	£376	£561	£626	£139	£425	£405	£440

- 2.12 Where there is no scope to reconfigure the existing facility to improve performance and land is currently unavailable to extend the young people's centre, a new facility may be proposed. A new centre is only likely to be sought on major new housing sites although proportionate contributions may be sought towards a new build project.

Technical Appendix 6: Libraries

1.0 Service Overview

- 1.1 As Local Libraries Authority, Hertfordshire County Council has a duty to provide a comprehensive and efficient library service for everyone who lives, works, or studies in the County under the 1964 Public Libraries and Museums Act. Hertfordshire County Council is committed to maintaining and modernising its libraries to continue to meet the changing needs of service users and to cope with additional demand brought about by new development.
- 1.2 Libraries are no longer a place solely to borrow books. They function as a community hub offering services and facilities to cater for a range of community needs including those of children, students, job seekers, and the elderly. Libraries offer free, authoritative, non-judgemental information services and supported access to online resources and services. They provide access to books, audio material, magazines, newspapers and community language material in both physical and digital formats, public computers, Wi-Fi and the internet, online services, ICT-based and other learning opportunities. They also offer neutral places to promote community wellbeing.
- 1.3 In 2016 the Libraries Taskforce published Libraries Deliver: Ambition for Public Libraries in England 2016-21. This report sets out seven outcomes libraries deliver for their communities, placing libraries at the heart of ‘stronger, more resilient communities’:

“

Libraries are open to everyone. Their staff understand their community’s needs and are trusted to provide reliable guidance and support on a wide range of issues when people need help. So they’re vital to help public services reach out into communities. Libraries already bring people together in welcoming community hubs which host local events and provide a shared sense of place for their users - ever more important in an increasingly digital age.

They’re uniquely placed to help local government and its partners deliver their strategic objectives, whether linked to community cohesion, health and wellbeing, economic growth, promoting independent living or increasing life chances. They also have an important role in reducing social inequalities; 35.8% of people living in the most disadvantaged areas visit their library.

”

- 1.4 [“Inspiring Libraries: A new strategy for Hertfordshire Library Service 2014-2024”](#) sets out the vision and direction for the service over the next ten years, and provides a framework for future decisions about service priorities. The strategy is based on three main themes:
 - The library as a vibrant community asset;
 - The digital library; and

- The library as an enhanced gateway to reading, information and wellbeing.

1.5 Hertfordshire's 46 library buildings are promoted in three different tiers in order to clarify the services available:

- **Tier 1** Centrally located in large towns, these offer the broadest range of stock and services, and are open for the longest hours. They are staffed by library staff, and Hertfordshire County Council invite volunteers to support the delivery of some services and activities.
- **Tier 2** Located in smaller towns, these provide core library services and offer a wide range of popular stock. Additional services will be tailored to meet local need/demand. They are staffed during core hours, and Hertfordshire County Council seeks to extend access through volunteer supervised self-service.
- **Tier 3** In smaller communities and villages, these libraries provide self-service access to library services, including the issue and return of books, access to computers/technology and study space and staff assistance via a video link to another library. Hertfordshire County Council invite local communities to add value to these self-service facilities through volunteer support and the provision of additional activities and services as decided by the local community. Seven of the larger Tier 3 libraries retain an element of paid library staff.

2.0 Library Projects

2.1 Hertfordshire County Council is committed to the provision of good quality library services to local communities and is continuously exploring new ways of delivering the service. Over the next ten years it is likely opportunities for improving library buildings will come through co-locating libraries with other services. Sharing buildings can provide increased opportunities for customers to access a number of services in one visit.

2.2 Hertfordshire County Council believes its libraries need to be updated to continue to improve the service offered and cope with additional demand brought about by increasing numbers of users resulting from new development. This will be carried out in the context of the Inspiring Libraries Strategy 2014-2024. New development puts pressure on services in a variety of ways and single or a combination of different solutions may be used in response.

2.3 Where additional capacity is required options to extend the public space available to deliver services will be considered where possible. This could be by the addition of an extension to the building however, this is often not possible so a variety of different approaches will be considered for example:

- Converting space previously used by staff into public space through the reduction in the number or size of office, workroom or storage space.
- Making staff space available for community use at certain times to meet demand for space for community groups.
- Libraries have been reconfigured to allow more flexible use of space so that areas become multifunctional and can be used by different customer groups at different times of the day.

- ICT suites have been configured so that they can be cordoned off to allow delivery of classes for part of the time in response to increased demand for ICT learning activities.
- Traditional large enquiry desks have been replaced with smaller enquiry “pods” with the use of more flexible ICT to increase space for public use.

2.4 Sometimes increased pressure on services can be alleviated through the use of innovative furniture solutions not previously available:

- Traditional shelving has been replaced with shelving on wheels which allows more flexible use of space and larger spaces to be created for activities. Examples of this include mobile shelving in children’s areas to enable increased numbers of children to attend regular story time activities or the introduction of wheeled shelving in the adult library to enable a space to be created to accommodate larger numbers for evening activities such as author’s talks.
- Seating has been improved to allow provision of compact comfortable seating, for example, sofas in children’s areas in response to demand from families for somewhere to sit to read to their children
- Desktop PCs have been replaced with more flexible benching and seating to accommodate increased demand for space for customers who wish to use their own devices on public Wi-Fi facilities

2.5 Any increase in population puts additional demand on the stock of the library service, whether this is physical stock or “virtual stock” in the case of electronic resources. Most electronic resources are licensed on the basis of being available to only one user at any one time, increased demand means purchasing additional “copies” in the same way as we would with physical books. Increased pressure on stock can be across all stock areas but certain types of development may put more pressure on certain categories of stock. For example, sheltered housing will put pressure on large print books and audio books and the demand for the Home Library Service. Developments aimed at young families will increase demand for children’s stock. Affordable housing may see pressure on stock used to support learning activities and job seeking.

2.6 Where it is not possible to meet increased demand through the above the Library Service can also respond by making services available in different ways or for longer periods of time, spreading the load and easing the pressure at busy periods.

2.7 One solution has been to make some the services available for longer periods of time where certain sections of the library are open on a self-service basis, with support from staff or volunteers. This sometimes requires some reconfiguration of the building and/or the addition of hardware and software to deploy an ICT solution.

2.8 Self service facilities can also be extended to enable customers to self-serve and reduce the need to queue for staff assistance, for example self-service printing from public PCs.

2.9 The development of online services also enables residents in new developments to access some services remotely, relieving pressure on the static service points.

2.10 On occasion the demographic of a new development may prompt the need to provide a service for which there was previously little or no demand. For example, a

residential development of one bedroomed flats aimed at 20 to 30 year olds, will create demand for e-services. Whereas developments comprising larger family housing may bring more established families with teenage children, thereby prompting the demand for new services, such as a wider range of ICT facilities.

- 2.11 Planning obligations will be determined on a case by case basis and may take the form of on-site provision (including build costs and land).

3.0 Assessing need and calculating demand

- 3.1 Provision for library services will be required from developments within the catchment area of the library that will be impacted upon by the development. Libraries in urban areas also serve surrounding rural areas and villages. Therefore, the need for contributions (and the expenditure of any library contributions received) from development in these locations may be based on the nearest library. However, contributions will be sought for the library that will be most affected by a proposed development. This may not necessarily be the local community library in all cases but a larger sub-regional library with a wider variety of library functions that draws its catchment from the geographical area of the proposed development.
- 3.2 Hertfordshire County Council has no current plans for additional libraries within the county although the promotion of very large strategic sites (in excess of 3,000 units) may require new library buildings to be considered. The drive for efficiencies and co-location of facilities is likely to influence overall space requirements and any opportunities for co-location will be actively explored. Such projects may also provide opportunities to increase library floor space.
- 3.3 Planning obligations towards library services are assessed using the Hertfordshire County Council Demographic Model which forecasts the number of people able to access library services likely to emerge from different types, sizes and tenures of dwellings. Details are available alongside this Guide.
- 3.4 Where the mitigation for a site impact might be met by the expansion or improvement of an existing facility, and additional land is not required, Hertfordshire County Council uses costs based on national standards. These costs are combined with census data from the Hertfordshire County Council Demographic Model to ensure that obligations sought are fair and reasonable, based on the specific number and type of units on an individual site.
- 3.5 The county council contribution is essentially based on population and on three elements, a contribution towards book stock, library equipment and buildings.
- 3.6 New developments will also place additional demands on the stock in terms of physical (hard copy) books and eBooks/ eAudio books. The National Library Standard upper threshold cites a recommended stock level of 1532 items per 1000 population. As of Nov 2020, the average price is £18.96 per stock item. This includes an allowance for physical books, eAudio books and eBooks and totals £29,046 per 1,000 population.
- 3.7 The rapid changing pace of technology has seen user demand change with less reliance on static personal computers and increased demand for power and wi-fi enabled spaces for Bring Your Own Device users as well as a demand for the library to offer access to new technologies where people can experiment and test these out

in a safe space. 'Creatorspace' and 'Creatorspace Out of the Box' offer these opportunities in addition to the standard IT offer in libraries. Based on current ICT provision, costs would be £778 per 1,000 population.

- 3.8 Fit out costs for shelving, furniture and display equipment are a further £301 per m² based upon current fitting out costs of new provision in Hertfordshire (£9,030 per 1,000 population).
- 3.9 The capacity of the library is determined based on a service requirement of 30m² of public library space per 1,000 population, based upon the Museums, Libraries and Archives (MLA) advice. Build costs are £2,823 per m² based on BCIS 1Q2019 (£84,690 per 1,000 population).
- 3.10 The four elements referred to above result in the following cost per person:
- Stock costs £29.04 per person;
 - Tech equipment costs: £0.78 per person;
 - Fit out costs: £9.03 per person;
 - Building costs: £84.69 per person;

Potential total to increase resources: £38.85 per person.
 Potential total to increase resources and floorspace: £123.54 per person.

- 3.11 The project identified to mitigate the impact of a development will have a bearing on the costs associated with a request for library service contributions. Projects expected to involve the development of new or extended floorspace or significant internal remodelling will incur building costs.
- 3.12 In circumstances where it can be evidenced that the cost to expand or redevelop a site is in excess of S106 funds to be achieved through the application of these charges, such as might be the case for sites located on brownfield sites, on constrained sites, or sites with planning limitations e.g. located on a flood plain, then a proportionate bespoke cost of providing the new site or expanding the existing site and/or purchasing additional land to do so may be sought from the developer.
- 3.13 An indication of estimated costs is provided in the tables below.

Project to increase resource requirements (£38.85 per person):

HOUSES				FLATS			
1 bed	2 bed	3 bed	4+ bed	1 bed	2 bed	3 bed	4+ bed
£55	£98	£142	£171	£54	£102	£124	£171

Project to provide an expanded or new centre (£123.54 per person):

HOUSES	FLATS
--------	-------

1 bed	2 bed	3 bed	4+ bed	1 bed	2 bed	3 bed	4+ bed
£173	£311	£452	£543	£173	£325	£395	£543

3.14 Where there is no scope to reconfigure the existing facility to improve performance and land is currently unavailable to extend the library, a new facility may be proposed. A new library is only likely to be sought on major new housing sites although proportionate contributions may be sought towards a new build project.

Technical Appendix 8: Fire and Rescue Service

1.0 Service Overview

- 1.1 The county council, in its capacity as the Fire and Rescue Authority (FRA), has statutory duties under The Fire and Rescue Services 2004 and must make provisions for:
- extinguishing fires in their area
 - protecting life and property in the event of fires in their area
 - rescuing and protecting people in the event of a road traffic collision, and
 - rescuing and protecting people in the event of other emergencies.

- 1.2 FRAs also need to collect information to assess risk in their areas as well as protect the health and safety of their workers. The Fire and Rescue Services Act 2004 also gives the Government responsibility for producing the [Fire and Rescue National Framework](#) which outlines the Government's high level priorities and objectives for FRAs in England. The National Framework's priorities for FRAs are to:

- identify and assess the full range of foreseeable fire and rescue related risks their areas face, make provision for prevention and protection activities and respond to incidents appropriately
- work in partnership with their communities and a wide range of partners locally and nationally to deliver their service
- be accountable to communities for the service they provide

The [Civil Contingencies Act 2004](#) sets out FRAs responsibility to react to emergencies as a category 1 responder.

- 1.3 The Service operates from 29 fire stations, a headquarters building, training and development centre, and a number of additional sites providing support services.
- 1.4 Underpinned by statutory obligations within the Fire and Rescue Services Act 2004, the Fire and Rescue National Framework for England provides the overall strategic direction for Fire and Rescue authorities. Within the framework, each authority is required to produce an [Integrated Risk Management Plan \(IRMP\)](#) that identifies and assesses all foreseeable fire and rescue related risks that could affect its community. Each IRMP must demonstrate how prevention, protection and response activities will best be used to mitigate the impact of risk on its communities. Through local determination of risk and local determination of response standards, it is expected that this will:
- Reduce the number of emergency incidents occurring;
 - Reduce death and injury from fire and other emergency incidents;
 - Reduce the socio-economic impacts of fire;
 - Protect heritage;
 - Safeguard the environment;
 - Contribute to the development of stronger, more self-sufficient and cohesive communities;
 - Provide value for money.

- 1.5 Section 17 of the Crime and Disorder Act 1998 requires local authorities and other agencies to consider crime and disorder reductions and community safety in the exercise of all their duties and activities.
- 1.6 The above legislation imposes a requirement on Fire and Rescue Authorities to ensure efficient and effective fire and rescue provision, and to ensure that the Service contributes effectively to the wider community safety agenda. Increases in population place additional demand on fire and rescue resources, both in terms of the need for additional capital investment in new facilities and funding for additional equipment, and on revenue budgets for firefighters, officers and support staff.
- 1.7 It is, therefore, reasonable for fire and rescue service needs to be considered by local planning authorities when determining planning applications relating to the provision of new development which brings forward an increased risk of incidents; changes the risk profile for the area and increases attendance times to incidents.
- 1.8 The capability and availability of water resources to fight fires is also a key consideration for the Service. The provision of public fire hydrants is not covered by Building Regulations 2010 (Part B5 as supported by Secretary of State Guidance 'Approved Document B') and developers are expected to make provision for fire hydrants to adequately protect a development site for fire-fighting purposes.

2 Assessing need and calculating demand

- 2.1 The demands on fire and rescue resources manifest themselves in a variety of forms, dependent on the scale and nature of the proposed development, including the need to:
 - acquire land and the capital costs of fire and rescue service buildings and associated facilities for the provision of new fire stations;
 - extend existing fire stations;
 - replace any temporary structures with permanent accommodation;
 - provide additional vehicles and other resources for response;
 - extend communication infrastructures;
 - reduce risk and demand through advice and the provision of equipment e.g. improve fire suppression (sprinklers) systems in existing and/or new premises;
 - enforcement: the fire and rescue service is a regulator of fire safety compliance in many businesses and this includes a requirement to inspect plans and high risk premises; in some instances this leads to the requirement for formal action / prosecution of businesses who neglect their duties to provide fire safe buildings;
 - hydrants: we employ staff to inspect water hydrants and ensure they are in good working order in advance of them being required to fight fires; additions to premises numbers increases ongoing revenue costs in this area;
 - review staffing levels.
- 2.2 The provision of effective fire and rescue services is dependent upon maintaining both a local and strategic approach. The value of the contribution required to mitigate the impact of development on fire and rescue resources will, therefore, need to take account of both these factors.

- 2.3 The matrix provided below outlines the fire and rescue service capital calculation of a Section 106 requirement for development of new dwellings across Hertfordshire. The fire and rescue service calculate its capital requirement to be £365.32 per new residential unit and £115.35 per m² for commercial floorspace.
- 2.4 Individual multipliers are not required as the service assess demand on a per dwelling basis, irrespective of household occupations.
- 2.5 In practice, the number and location of hydrants is determined at the time the water services for the development are planned in detail, which is usually after planning consent is granted. In instances where adequate hydrants are available at the time the water mains are planned, then no extra hydrants will be needed.
- 2.6 Fire hydrants should be designed into the development at the masterplanning stage and implemented through a planning condition. Condition wording is provided below:

The development hereby permitted shall not be commenced until a scheme for the provision of adequate water supplies and fire hydrants, necessary for fire fighting purposes at the site, has been submitted to and approved in writing by the Local Planning Authority. The development shall not be occupied until the scheme has been implemented in accordance with the approved details.

Reason for condition: to ensure adequate water infrastructure provision is made on site for the local fire service to discharge its statutory firefighting duties.

- 2.6 The developer, promoter, and/or local planning authority should coordinate with the Water Officer to confirm the requirement for a condition, and any subsequent need to discharge, remove or change the condition. The Water Officer is contactable at water@hertfordshire.gov.uk.

Calculation of costs: Residential

Item	Description	Data
Activity factor		
1	Residential fires as a percentage of all property fires (3-year average) ¹	74.48%

¹ Data from HFRS Vision incident recording system

Cost of new additional fire stations, appliances and equipment		
2	Number of Households in Hertfordshire ²	485,041
3	Divide by the number of fire stations	29
4	Average number of dwellings per fire station (2 ÷ 3)	16,725
5	Estimated build cost per fire station	£5,750,000
6	Average cost of new fire appliance plus equipment ³	£360,000
7	Average cost per new dwelling towards buildings, appliances and equipment ((5 + 6) ÷ 4) by new build increase	£365.32
Annual lease costs of additional firefighters personal protective equipment (PPE)		
8	Averaged establishment per fire station (FTE)	28
9	Total PPE cost per new fire station (Leased)	£15,732

Calculation of costs: Commercial

Item	Description	Data
Activity factor		
1	Non-residential fires as a percentage of all property fires (3-year average) ⁴	21.76%
Cost of new additional fire stations, appliances and equipment		
2	Number of non-residential businesses in Hertfordshire ⁵	34,303
3	Divide by the number of fire stations	29
4	Average number of non-residential buildings per fire station (2 ÷ 3)	1,182
5	Estimated build cost per fire station	£5,750,000
6	Average cost of new fire appliance plus equipment ³	£360,000
7	Average cost per new non-residential unit towards buildings, appliances and equipment ((5 + 6) ÷ 4) by new build increase	£5,169
8	Average floorspace sampled ⁵	44.81m ²
9	Cost per non-residential building per m2 (7÷8)	£115.35
Annual lease costs of additional firefighters personal protective equipment (PPE)		
10	Averaged establishment per fire station (FTE)	28
11	Total PPE cost per new fire station (Leased)	£15,732

Building new fire stations

- 2.7 When building a new fire station, it is essential that all factors are considered within the design to ensure that both operational and local community needs are met.

² Data from CIPFA Fire and Rescue Service Statistics – 2019 Summary

³ Data from HFRS procurement department

⁴ Data from HFRS Vision incident recording system

⁵ LEP - <https://www.hertfordshirelep.com/media/7128/loss-of-employment-space-in-hertfordshire-february-2019.pdf>

- 2.8 There are various staffing models in operation across Hertfordshire Fire and Rescue Service (HFRS) which directly influence the size of, and range of facilities required. Table 1, below, gives examples of both the total Gross Internal Area (GIA) and land area requirement for new fire stations based on the duty system type. These are based on current Whole-time and Day Crewed/On-call crewing station models within HFRS. These illustrative examples would form the basis of discussions for future new builds.

Examples of station areas within HFRS by duty system type

Duty system type	Station Area (Sq.m)	Site Area (Sq.m)
Whole-time Station	1,300	4,400
Day crewed Station	620	2,340
On-call Station	240	2,000

- 2.8 In addition, any new station will require certain facilities as standard specifications. A summary of the main requirements is listed below but, again, these would be discussed on a case by case basis dependent on the requirements of the Service:

- Minimum of 3 appliance bays for Whole-time Stations;
- Minimum of 2 appliance bays for Variable/On-call Stations;
- bay ancillary garage (at Whole-time stations only);
- Training ground / drill yard (to be suitable for Breathing Apparatus and line working training);
- Training Tower;
- Breathing Apparatus maintenance room (including air compressor);
- Kitchen facilities;
- Rest area;
- Watch room;
- Lecture Room;
- Office space;
- Specific room/facility for community use;
- Safe access and egress for appliances;
- An area suitable for removal of demountable pods from prime movers;
- Facilities for East of England Ambulance Service*
- Diesel pump (above ground as per Engineering Manager request).

Fire Suppression (Sprinkler) systems

- 2.9 The emphasis for the Fire and Rescue Service is changing from that of reacting to fires and other emergencies, to preventing and reducing their impact on individuals, communities and organisations. In developing prevention strategies, Fire Authorities are including the use of fire suppression systems, particularly sprinklers, to protect the most at risk and vulnerable in society.
- 2.10 The expansion of Hertfordshire through development provides an opportunity to take a lead by applying a proactive approach towards protecting the community and infrastructure through in-built fire suppression systems.
- 2.11 A sprinkler installation can significantly help to mitigate the loss of life and damage to property caused by fire and the ongoing financial and social disruption to the

householder or community. Click for more information about [Efficiency and Effectiveness of Sprinkler Systems in the United Kingdom](#).