

PROPOSED DEVELOPMENT OF LAND AT BIRCHALL GARDEN SUBURB

REPTILE SURVEY

Prepared by:

Philip Parker Associates
White Row Cottage
Leziate Drove
Pott Row
KING'S LYNN
Norfolk
PE32 1DB

Prepared for:

Tarmac Trading Ltd

Report ref: P2014-12 Appendix 9.8 FINAL

Date : 20th June 2017

CONTENTS

- 1.0 Background
- 2.0 Legislation and policy
- 3.0 Objectives of the survey
- 4.0 Survey methodology
- 5.0 Survey results
- 6.0 Valuation of the reptile population
- 7.0 Valuation of reptile population
- 8.0 References

Figure 9.8.1 Reptile survey areas

Appendix A Reptile survey area M3

Appendix B Reptile survey area M6/G4 to G7

1.1 BACKGROUND

- 1.2 Tarmac Trading Ltd are in the process of formulating proposals for the development of land near Welwyn Garden City known as Birchall Garden Suburb.
- 1.3 As part of the development process, Tarmac commissioned Philip Parker Associates Ltd (who have undertaken other survey work for them at Panshanger Park) to undertake various surveys to provide baseline ecological information to assist in the Ecological Impact Assessment (EclA) process.
- 1.4 As part of the initial internal scoping exercise for the site by Philip Parker Associates, given some of the habitats present, reptiles were identified as a species that could potentially occur on the site and therefore further survey work was undertaken.
- 1.5 The report should be read in conjunction with Drawing 9.1.1 Ecological survey compartments and ponds and Drawing 9.8.1 Reptile survey areas.

2.0 LEGISLATION AND POLICY

- 2.1 The reptiles occurring in Hertfordshire, (viviparous lizard *Zootoca vivipara*, slow worm *Anguis fragilis*, grass snake *Natrix natrix*, adder *Vipera berus*) are all given limited legal protection under part of Section 9 (1) and all of Section 9 (5) of the Wildlife and Countryside Act 1981 (as amended). This means that it is an offence to intentionally kill, injure and offer for sale. Grass snake, viviparous lizard and slow worm are still considered to be relatively widespread in the County, adders are now more restricted. English Nature research report 666 suggests that adders are possibly extinct in Hertfordshire (English Nature 2005).

3.0 OBJECTIVES OF THE SURVEY

3.1 The objectives of the reptile survey were as follows:

- To identify the suitability of areas within the study area to support common reptiles (common lizard and slow worm in particular). It was anticipated that grass snake, being a very mobile species, could effectively turn up in any suitable location, particularly close to the major wetland areas. It was considered impractical to survey every area on site;
- To undertake detailed surveys of the most optimal habitats to establish presence and provide some idea as to the population levels present.

4.0 SURVEY METHODOLOGY

4.1 Scope of the survey

A habitat assessment was undertaken in March 2014 by Howard and Malcolm Hillier, both experienced reptile surveyors. The survey looked particularly for areas of rough grassland with a tussocky structure and potential basking areas (ie area most likely to support reptiles). From this assessment, it was considered that the most likely areas to support reptiles was the Mosaic Area M3, which occurs at the southern edge of the wetland corridor M4 and M5 (it contained a variable structure, potential basking areas, ant hills etc). This was the area identified for the initial survey in 2014.

4.2 The majority of the other grassland areas on site were grazed short by horses making them generally unsuitable for reptiles. The grasslands in the vicinity of Birchall Farm were also considered unsuitable as at that time as they were either grazed by sheep or horses, consequently with a poor vegetation structure.

4.3 At the Community Planning weekend on the 20th and 21st November 2015, members of the Commons Nature Reserve reported the presence of slow worm along the old disused railway line (although the exact location was not identified and it was not certain whether it directly related to the site). Given this information it was proposed therefore that supplementary survey was undertaken along the line of the disused railway in Spring/summer 2016 (including M6 and parts of G4 to G7)

4.4 Desk Top review

A data search with HERC was undertaken in November 2014 updated in February 2015 and 12th April 2017. The latest search covers the site boundary plus an area of 2km beyond the boundary. The following records were identified in the latest search (this being the most up to date):

4.5 **Table 9.8.1 Reptile records**

Species	Record	Distance to site
Adder <i>Vipera berus</i>	No records within 2km of the site boundary	
Common lizard <i>Zootoca Vivipara</i> 2 records	2 juveniles at Watch Mead Disused Railway on the 12 th April 1997 (TL253128)	1390m
	2 juveniles on the 17 th September 1999 (TL2512)	Not possible to calculate
Slow worm <i>Anguis fragilis</i> 12 records	2 at the Commons LNR on 22 nd September 2015 (TL2591611037)	20m
	1 at the Common LNR on 22 nd	110m

Species	Record	Distance to site
	September 2015 (TL2586411125)	
	3 at the Commons LNR 08/09/2015 (TL257108) and 14 on the 24/5/15	120m
	10 at the Commons LNR on 22/9/15 (TL2575110900)	160m
	12 at the Commons LNR on the 15 th June 2015 (TL257108)	120m
	1 at Panshanger Park on 6 th August 2015 at (TL25541129)	460m
	1 at Watch Meads Disused railway line on the 12 th April 1997 (TL253128)	1390m
	1 at Garden Wood on 7 th May 2015 (TL29261295)	1490m
	3 other records (to 1km squares only) including 1 at the Commons LNR on 19/5/15	Not possible to calculate
Grass snake <i>Natrix natrix</i> 55 records	1 at the Common LNR on 22/09/2015 (TL2591611037)	20m
	2 at the Commons LNR on 24 th May 2015 (TL257108)	120m
	3 at the Common LNR on 22/9/15 (TL2575110900)	160m
	Recorded from Archers Green on 21/7/15 (TL27891340)	660m
	5 other records	>1km
	All remaining records to 1km square only	

4.6 Field Work

A reptile survey was undertaken in accordance with the document 'Froglife Advice Sheet 10: Reptile Survey - An introduction to planning, conducting and interpreting surveys for snakes and lizard conservation'. This suggests the refuge density (5-10 refuges per ha) and effort of a minimum of 7 visits to demonstrate presence/absence:

4.7 The survey used a combination of visual observation and artificial refuges. Pieces of roofing felt (1m x 0.5m) were placed in suitable habitat where they would be exposed to direct sunlight for part of the day. A total of 99 refuges were placed at a minimum density of 10/ha across the whole of the mosaic M3 on the 17th June 2014.

4.8 Refuges were checked on 14 occasions (2 per day) on 7 dates between 27th June and 26th September 2014 during suitable weather conditions, e.g. sun or sun and cloud with temperatures between 9°C and 15°C. Any obvious habitat piles and open habitat were also inspected for basking reptiles (as were other areas around the site not subject to the detailed survey).

4.9 For the survey of the M6 and G4 to G7 boundary, 134 refuges were placed on the 27th April 2016, again at a density of approximately 10/ha. These were surveyed on 14 occasions

(morning and afternoon) between 4th June 2016 and 20th September 2016.

4.10 Survey personnel

The initial site appraisal was undertaken by However and Malcolm Hillier who each have 30+ years experience in conducting reptile surveys. The placing and checking of refuges was undertaken by Malcolm Hillier assisted by Sue Hillier.

4.11 Constraints to the survey

The size of the site made it impractical to survey all areas and therefore the most optimal areas were chosen for survey. It is considered that all other areas are suboptimal for reptiles.

5.0 SURVEY RESULTS

5.1 Details of the surveys are shown in Appendix 9.8.1, a summary is given in the following table 9.8.2.

Table 9.8.2 Results of reptile survey

	M3						
	27/6/14	14/8/14	23/8/14	31/8/14	8/9/14	23/9/14	26/9/14
Grass snake	-	1 m	1m	1m, 1f and 1imm	1m	2m	1 imm
Adder	-	-	-	-	-	-	-
Slow worm	-	-	-	-	-	-	-
Viviparous lizard	-	-	-	-	-	-	-
	M6/G4/G5/G6/G7 (part)						
	4/6/16	12/6/16	20/6/16	19/8/16	7/9/16	15/9/16	20/9/16
Grass snake	1m, 1imm	1m	2m, 1f, 2imm	2m, 2imm	1 imm	1m, 1imm	1m
Adder	-	-	-	-	-	-	-
Slow Worm	-	-	-	-	-	-	-
Viviparous lizard	-	-	-	-	-	-	-

6.0 VALUATION OF REPTILE POPULATION

- 6.1 The on-line Hertfordshire Atlas of mammals, Amphibians and Reptiles 2015 – 2019 suggests that viviparous lizard are restricted largely to the northern boundary of the county, slow worm and grass snake are more concentrated around the central part of the county TL21 and TL31. It is accepted however this is a developing distribution map.
- 6.2 Using the criteria given in Froglife 1999, the survey results confirm a low population of grass snake (peak of 3 individuals) present in M3 (they are also likely to use the water bodies and terrestrial habitat in M4 and M5 for hunting). A peak of 5 grass snakes along the the old disused railway line from G4 to G7 is considered to be at the lower end of the 'Good' Category.
- 6.3 The population of grass snakes on the site is considered to be of Local Value.

7.0 SUMMARY

- 7.1 Reptile survey of the Birchall Garden Site has found a Low to Good sized population of grass snakes at two surveyed locations on the site (M3 and M6/G4/G5/G6/G7 strip). No slow worms were recorded despite suggestions at the Community Planning Weekend that they may be present along the line of the old railway (the latter survey area). They are however known to occur in reasonable numbers at the Common LNR to the south-west of the site. Grass snake, due to its wide ranging habit, could potentially be present in many suitable locations across the site. The population of grass snake on the site is considered of local Value. Other habitat on site were considered to be sub-optimal for reptiles due to the structure and grazing taking place.

8.0 REFERENCES

Atkins W 2005; Conservation Status of the adder *Vipera berus* in Greater London, English Nature Research Report No 666

English Nature (2004) Reptiles : Guidelines for developers

Froglife (1999); Reptile survey : An introduction to planning, conducting, and interpreting surveys for snake and lizard conservation. Froglife advice sheet 10, Froglife, Halesworth

Gent T and Gibson S, eds.(1998) Herpetofauna Workers Manual; Peterborough: Joint Nature Conservation Committee

Herpetofauna Groups of Britain and Ireland (1988); Evaluating local mitigation/translocation programmes: Maintaining best practice and lawful standards. HGBI advisory notes for Amphibian and Reptile Groups (ARG'S) HGBI, c/o Froglife, Halesworth. Unpubl.

Hertfordshire Atlas of Mammals, Amphibians and Reptiles 2015-19; mammal-atlas.hnhs.org/2015/ (accessed 05/04/17)

Mammals, Amphibians and Reptiles of Hertfordshire (Natural history of Hertfordshire) (Nov 2001) Hertfordshire Natural History Society and Training Publications Limited

APPENDIX A BGS REPTILE SURVEY AREA M3

99 Refugia deployed on the 17th June 2014

Area Code	Refugia Number	Grid Reference (TL)	Date													
			27th June 2014	14th August 2014												
			AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
M3	1	2608610560	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M3	2	2609010560	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M3	3	2609810563	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M3	4	2610210563	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M3	5	2610810567	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M3	6	2611110580	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M3	7	2609910550	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M3	8	2610410548	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M3	9	2610810538	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M3	10	2611910539	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M3	11	2612610530	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M3	12	2613410526	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M3	13	2613210522	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M3	14	2613810515	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M3	15	2614510517	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M3	16	2617110439	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M3	17	2616510435	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M3	18	2615410432	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M3	19	2614810430	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M3	20	2613810427	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M3	21	2613110423	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M3	22	2612210424	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M3	23	2611210419	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M3	24	2610610419	0	0	0	0	0	0	0	0	0	0	0	0	0	0

PROPOSED DEVELOPMENT OF LAND AT BIRCHALL GARDEN SUBURB
REPTILE SURVEY

			27th June 2014		14th August 2014		23rd August 2014		31st August 2014		8th September 2014		23rd September 2014		26th September 2014	
M3	25	2609810413	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M3	26	2609110410	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M3	27	2607510398	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M3	28	2607410416	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M3	29	2608010418	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M3	30	2607510428	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M3	31	2608110427	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M3	32	2608910426	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M3	33	2609110434	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M3	34	2609610432	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M3	35	2609910436	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M3	36	2616010450	0	0	0	0	1m GS	0	0	0	0	1m GS	0	0	0	0
M3	37	2615210456	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M3	38	2613610454	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M3	39	2612910455	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M3	40	2612210450	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M3	41	2611610451	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M3	42	2611110449	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M3	43	2610010445	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M3	44	2609010445	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M3	45	2607210438	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M3	46	2606110445	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M3	47	2606610455	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M3	48	2608110465	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M3	49	2610010463	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M3	50	2611710463	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M3	51	2612210462	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M3	52	2612710464	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M3	53	2613210467	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M3	54	2613910470	0	0	0	0	0	0	0	0	0	0	0	0	0	0

PROPOSED DEVELOPMENT OF LAND AT BIRCHALL GARDEN SUBURB
REPTILE SURVEY

			27th June 2014		14th August 2014		23rd August 2014		31st August 2014		8th September 2014		23rd September 2014		26th September 2014	
M3	55	2614710476	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M3	56	2615210482	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M3	57	2613710497	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M3	58	2612310505	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M3	59	2610910515	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M3	60	2610410510	0	0	0	0	0	0	1m+1f GS	0	0	0	0	0	0	0
M3	61	2609210505	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M3	62	2608610499	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M3	63	2607310496	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M3	64	2606410490	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M3	65	2604510477	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M3	66	2606010469	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M3	67	2607010471	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M3	68	2603810489	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M3	69	2604710500	0	0	0	0	0	0	1imm GS	0	0	0	0	0	0	1imm GS
M3	70	2605810506	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M3	71	2606810509	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M3	72	2607510513	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M3	73	2608410519	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M3	74	2609410523	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M3	75	2607710535	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M3	76	2607210531	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M3	77	2606010527	0	0	0	0	0	0	0	1m GS	0	0	0	0	0	0
M3	78	2605310521	0	0	1m GS	1m GS	0	0	0	0	0	1m GS	0	0	0	0
M3	79	2604510518	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M3	80	2604310504	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M3	81	2603510511	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M3	82	2603910498	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M3	83	2602910525	0	0	0	0	0	0	0	0	0	0	0	0	0	0

PROPOSED DEVELOPMENT OF LAND AT BIRCHALL GARDEN SUBURB
REPTILE SURVEY

			27th June 2014		14th August 2014		23rd August 2014		31st August 2014		8th September 2014		23rd September 2014		26th September 2014	
M3	84	2603510533	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M3	85	2604010534	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M3	86	2605110537	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M3	87	2605610538	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M3	88	2606310546	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M3	89	2605010544	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M3	90	2604710552	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M3	91	2604510547	0	0	0	0	0	0	0	1m GS	0	0	1m GS	0	0	0
M3	92	2603910551	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M3	93	2603010538	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M3	94	2601710550	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M3	95	2602710556	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M3	96	2603210551	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M3	97	2608910471	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M3	98	2608610447	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M3	99	2615810474	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Key

GS=Grass Snake
imm=Immature
juv=Juvenile
m=Male
f=Female

Date	Weather	AM Temp	PM Temp
27th June	Sunshine & showers	15	17
14th Aug	Hazy Sunshine	17	18
23rd Aug	Sunny	18	18
31st Aug	Sunny	16	18
8th Sept	Sunny	18	20
23rd Sept	Sunny	18	18
26th Sept	Sunny	17	19

APPENDIX B BGS REPTILE SURVEY AREA M6 and parts of G4 to G7

134 Refugia deployed on the 27th April 2016

Refugia Number	Grid Reference (TL)	Date													
		4th June 2016		12th June 2016		20th June 2016		19th August 2016		7th Sept 2016		15th Sept 2016		20th Sept 2016	
		AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
1	2634311691	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	2637211722	0	0	0	0	m GS	0	0	m GS	0	0	0	0	0	0
3	2637811726	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	2639611721	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	2641211722	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	2643011726	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	2643511729	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	2644611736	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	2645411732	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	2646011732	T	T	0	0	0	0	0	0	0	0	0	0	0	0
11	2647011721	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	2647811714	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	2648511709	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	2649011704	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15	2649611698	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16	2650411693	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17	2650911689	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18	2651511679	0	0	0	0	0	f GS	0	0	0	0	0	0	0	0
19	2651611669	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20	2651811668	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21	2651911659	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22	2652011649	0	0	0	0	0	0	0	0	0	0	0	0	0	0

PROPOSED DEVELOPMENT OF LAND AT BIRCHALL GARDEN SUBURB
REPTILE SURVEY

23	2651911642	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24	2653211633	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25	2653611626	0	0	0	0	0	0	0	0	0	0	0	0	0	0
26	2654011619	0	0	0	0	0	0	0	0	0	0	0	0	0	0
27	2654411611	0	0	0	0	0	0	0	0	0	0	0	0	0	0
28	2654811600	0	0	0	0	0	0	0	0	0	0	0	0	0	0
29	2655111593	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30	2655511579	0	0	0	0	0	0	0	0	0	0	0	0	0	0
31	2655711575	0	0	0	0	0	0	0	0	0	0	0	0	0	0
32	2656111564	0	0	0	0	0	0	0	0	0	0	0	0	0	0
33	2656111546	0	0	0	0	0	0	0	0	0	0	0	0	0	0
34	2663411570	0	0	0	0	0	0	0	0	0	0	0	0	0	0
35	2664911560	0	0	0	0	0	0	0	0	0	0	0	0	0	0
36	2666111549	0	0	0	0	0	0	0	0	0	0	0	0	0	0
37	2667211537	0	0	0	0	0	0	0	0	0	0	0	0	0	0
38	2667611534	0	0	0	0	0	0	0	0	0	0	0	0	0	0
39	2668111527	0	0	T	T	imm GS	0	imm GS	imm GS	0	imm GS	0	0	0	0
40	2668911520	0	0	0	0	0	0	0	0	0	0	0	0	0	0
41	2669811512	0	0	0	0	0	0	0	0	0	0	0	0	0	0
42	2670111509	0	0	0	0	0	0	0	0	0	0	0	0	0	0
43	2671011500	0	0	0	0	0	0	0	0	0	0	0	0	0	0
44	2671511493	0	0	0	0	0	0	0	0	0	0	0	0	0	0
45	2672211486	0	0	0	0	0	0	0	0	0	0	0	0	0	0
46	2673511474	0	0	0	0	0	0	0	0	0	0	0	0	0	0
47	2673911470	0	0	0	0	0	0	0	0	0	0	0	0	0	0
48	2674811462	0	0	0	0	0	0	0	0	0	0	0	0	0	0
49	2675211458	0	0	0	0	0	0	0	0	0	0	0	0	0	0
50	2676111448	0	0	0	0	0	0	0	0	0	0	0	0	0	0
51	2676611443	0	0	0	0	0	0	0	0	0	0	0	0	0	0
52	2677411440	0	0	0	0	0	0	0	0	0	0	0	0	0	0
53	2677911432	0	0	0	0	0	0	0	0	0	0	0	0	0	0
54	2678511424	0	0	0	0	0	0	0	0	0	0	0	0	0	0

PROPOSED DEVELOPMENT OF LAND AT BIRCHALL GARDEN SUBURB
 REPTILE SURVEY

55	2679411419	0	0	0	0	0	0	0	0	0	0	0	0	0	0
56	2679911410	0	0	0	0	0	0	0	0	0	0	0	0	0	0
57	2680611408	0	0	0	0	0	0	0	0	0	0	0	0	0	0
58	2681411400	0	0	0	0	0	0	0	0	0	0	0	0	0	0
59	2681611395	0	0	0	0	0	0	0	0	0	0	0	0	0	0
60	2682611389	0	0	0	0	0	0	0	0	0	0	0	0	0	0
61	2682711382	0	0	0	0	0	0	0	0	0	0	0	0	0	0
62	2683711373	0	0	0	0	0	0	0	0	0	0	0	0	0	0
63	2684711369	0	0	0	0	0	0	0	0	0	0	0	0	0	0
64	2685411362	0	0	0	0	0	0	0	0	0	0	0	0	0	0
65	2685811358	0	0	0	0	0	0	0	0	0	0	0	0	0	0
66	2686611347	0	0	0	0	0	0	0	0	0	0	0	0	0	0
67	2687111345	0	0	0	0	0	0	0	0	0	0	0	0	0	0
68	2687711334	0	0	0	0	0	0	0	0	0	0	0	0	0	0
69	2688011332	0	0	0	0	0	0	0	0	0	0	0	0	0	0
70	2688611321	0	0	0	0	0	0	0	0	0	0	0	0	0	0
71	2688611320	0	0	0	0	0	0	0	0	0	0	0	0	0	0
72	2688711307	0	0	0	0	0	0	0	0	0	0	0	0	0	0
73	2688911304	0	0	0	0	0	0	0	0	0	0	0	0	0	0
74	2689011297	0	0	0	0	0	0	0	0	0	0	0	0	0	0
75	2689011291	0	0	0	0	0	0	0	0	0	0	0	0	0	0
76	2688811288	0	0	0	0	0	0	0	0	0	0	0	0	0	0
77	2688811283	0	0	0	0	0	0	0	0	0	0	0	0	0	0
78	2689411271	0	0	0	0	0	0	0	0	0	0	0	0	0	0
79	2690411267	imm GS	0	0	0	imm GS	0	0	imm GS	0	0	0	0	0	0
80	2691211257	0	0	0	0	0	0	0	0	0	0	0	0	0	0
81	2692611244	0	0	0	0	0	0	0	0	0	0	0	0	0	0
82	2693411238	0	0	0	0	0	0	0	0	0	0	0	0	0	0
83	2694511234	0	0	0	0	0	0	0	0	0	0	0	0	0	0
84	2695311229	0	0	0	0	0	0	0	0	0	0	0	0	0	0

PROPOSED DEVELOPMENT OF LAND AT BIRCHALL GARDEN SUBURB
REPTILE SURVEY

85	2697411215	0	0	0	0	0	0	0	0	0	0	0	0	0	0
86	2699111209	0	0	0	0	0	0	0	0	0	0	0	0	0	0
87	2699911204	0	0	0	0	0	0	0	0	0	0	0	0	0	0
88	2701811195	0	0	0	T	0	0	T	T	0	0	0	0	0	0
89	2702611190	0	0	0	0	0	0	0	0	0	0	0	0	0	0
90	2703711183	0	0	0	0	0	0	0	0	0	0	0	0	0	0
91	2704411179	0	0	0	0	0	0	0	0	0	0	0	0	0	0
92	2705211173	0	0	0	0	0	0	0	0	0	0	0	0	0	0
93	2706011170	0	0	0	0	0	0	0	0	0	0	0	0	0	0
94	2706711166	0	0	0	0	0	0	0	0	0	0	0	0	0	0
95	2707511164	0	0	0	0	0	0	0	0	0	0	0	0	0	0
96	2708911155	0	0	m GS	0	0	0	m GS	0	0	0	m GS	0	0	0
97	2709411150	T	T	T	T	T	T	0	0	0	T	0	0	0	0
98	2710311148	0	0	0	0	0	0	0	0	0	0	0	0	0	0
99	2710911143	0	0	0	0	0	0	0	0	0	0	0	0	0	0
100	2712711134	0	0	0	0	0	0	0	0	imm GS	0	0	imm GS	0	0
101	2713111130	0	0	0	0	0	0	0	0	0	0	0	0	0	0
102	2713611126	0	0	0	0	0	0	0	0	0	0	0	0	0	0
103	2711411122	0	0	0	0	0	0	0	0	0	0	0	0	0	0
104	2714811118	m GS	m GS	0	0	m GS	0	0	m GS	0	0	0	0	m GS	0
105	2715511113	0	0	0	0	0	0	0	0	0	0	0	0	0	0
106	2716311107	0	0	T	T	T	T	0	0	0	0	0	0	0	0
107	2716811102	0	0	0	0	0	0	0	0	0	0	0	0	0	0
108	2717611098	0	0	0	0	0	0	0	0	0	0	0	0	0	0
109	2718111093	0	0	0	0	0	0	0	0	0	0	0	0	0	0
110	2718811085	0	0	2xT	2xT	T	T	0	0	0	0	0	0	0	0
111	2719411080	0	0	0	0	0	0	0	0	0	0	0	0	0	0
112	2720211076	0	0	0	0	0	0	0	T	0	0	0	0	0	0
113	2720911017	0	0	0	0	0	0	0	0	0	0	0	0	0	0
114	2721811067	0	0	0	0	0	0	0	0	0	0	0	0	0	0

PROPOSED DEVELOPMENT OF LAND AT BIRCHALL GARDEN SUBURB
REPTILE SURVEY

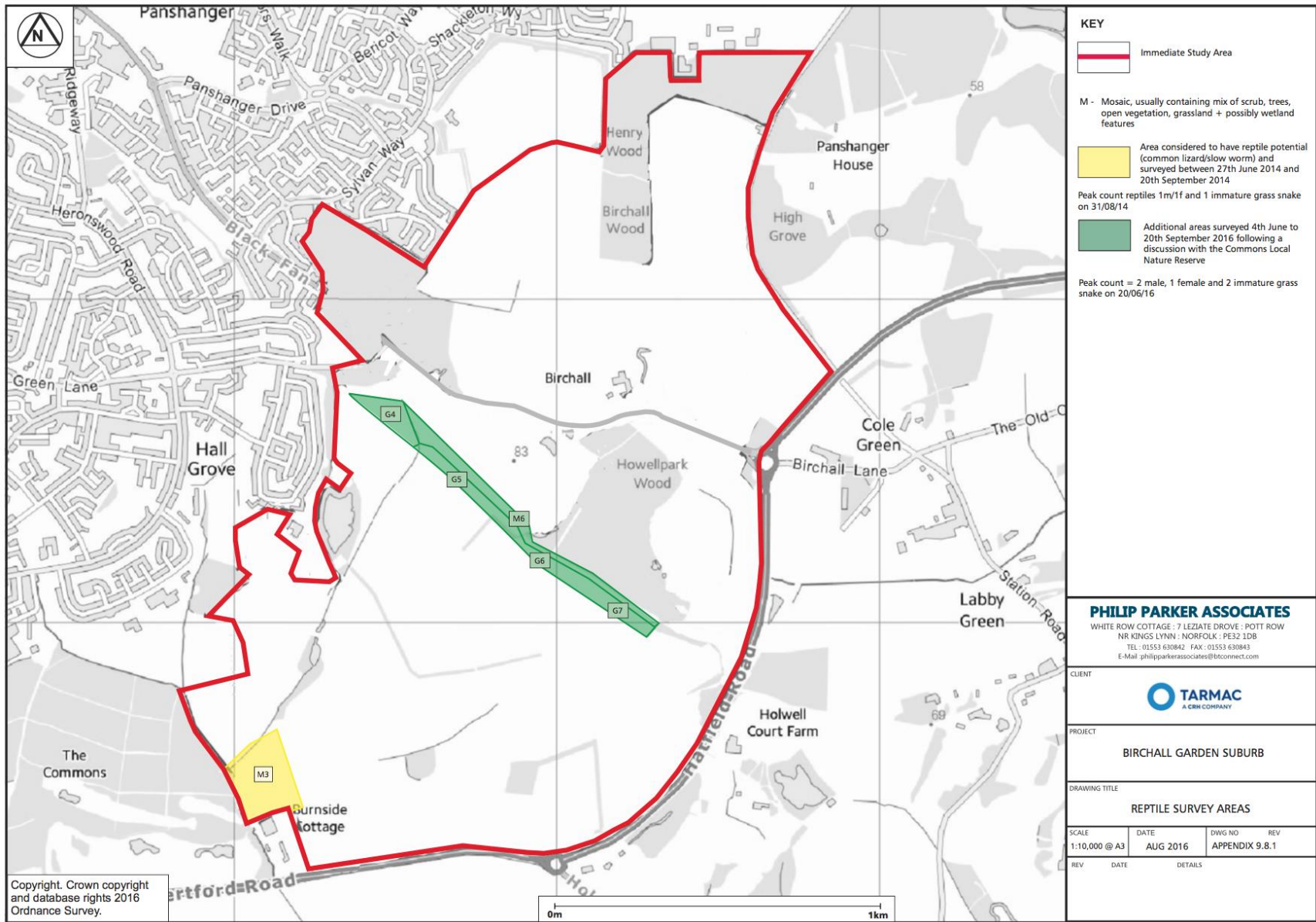
115	2722311063	T	T	0	0	0	0	0	0	0	0	0	0	0	0
116	2650211547	0	0	0	0	0	0	0	0	0	0	0	0	0	0
117	2649211545	0	0	0	0	0	0	0	0	0	0	0	0	0	0
118	2651711557	0	0	0	0	0	0	0	0	0	0	0	0	0	0
119	2651511573	0	0	0	0	0	0	0	0	0	0	0	0	0	0
120	2651411588	0	0	0	0	0	0	0	0	0	0	0	0	0	0
121	2649411629	0	0	0	0	0	0	0	0	0	0	0	0	0	0
122	2648211629	0	0	0	0	0	0	0	0	0	0	0	0	0	0
123	2647411638	0	0	0	0	0	0	0	0	0	0	0	0	0	0
124	2648011649	0	0	0	0	T	T	0	0	0	0	0	0	0	0
125	2647511657	0	0	0	0	0	0	0	0	0	0	0	0	0	0
126	2651511667	0	0	0	0	0	0	0	0	0	0	0	0	0	0
127	2650811677	0	0	0	0	0	0	0	0	0	0	0	0	0	0
128	2649511669	0	0	0	0	0	0	0	0	0	0	0	0	0	0
129	2648911674	0	0	0	0	0	0	0	0	0	0	0	0	0	0
130	2647111703	0	0	0	0	0	0	0	0	0	0	0	0	0	0
131	2648511696	0	0	0	0	0	0	0	0	0	0	0	0	0	0
132	2647911687	0	0	0	0	0	0	0	0	0	0	0	0	0	0
133	2647111691	0	0	0	0	0	0	0	0	0	0	0	0	0	0
134	2645911716	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Date	Weather	AM Temp	PM Temp
4th June	Sunny	17	17
12th June	Hazy Sunshine	15	18
20th June	Cloudy with Sunny Periods	16	19
19th August	Sunshine & showers	16	18
7th September	Sunny	18	18
15th September	Hazy Sunshine	15	18
20th September	Cloudy with Sunny Periods	17	19

Key

GS = Grass Snake, ♀ = Female, Imm =
= Toad, M = Male, F Immature

PROPOSED DEVELOPMENT OF LAND AT BIRCHALL GARDEN SUBURB
REPTILE SURVEY



**Philip Parker Associates
White Row Cottage
Leziate Drove
Pott Row
King's Lynn
PE32 1DB**

**Tel : 01553 630842 Fax : 01553 630843
Email : admin@philipparkerassociates.co.uk**