

Appendix 9.7

Reptiles



Hallam Land Management Ltd.

Great Wilsey Park

Haverhill, Suffolk

Reptile Report

Appendix 9.7

August 2015

FPCR Environment and Design Ltd

Registered Office: Lockington Hall, Lockington, Derby DE74 2RH

Company No. 07128076. [T] 01509 672772 [F] 01509 674565 [E] mail@fpcr.co.uk [W] www.fpcr.co.uk

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1.0 INTRODUCTION

- 1.1 FPCR Environment and Design Ltd were commissioned by Hallam Land Management Ltd to complete reptile surveys within the site boundaries of a proposed development of the north east of Haverhill, known as Great Wisley Park.
- 1.2 This report provides the results of the reptile survey work completed between June 2014 and September 2014, within the 168.34ha of the proposed development area.

Site Location and Context

- 1.3 The site was situated on the north eastern fringes of the urban area of Haverhill, Suffolk. It was largely located within a rural setting with a number of arable fields, woodland compartments, dry ditches and hedgerows. A tributary of the River Stour runs through the centre of the site, which during the majority of the survey period was dry.

Development Proposals

- 1.4 The current site proposals includes the construction of residential housing with community hubs comprising of community centre, health facilities, local shops and schools. Associated vehicular and pedestrian access and associated car parking arrangements, and on-site open space will also be constructed.

2.0 METHODOLOGY

Desktop studies

- 2.1 In order to compile existing baseline information, relevant ecological information was requested from both statutory and non-statutory nature conservation organisations including:
- Multi Agency Geographic Information for the Countryside (MAGIC) website (www.magic.defra.gov.uk);
 - Suffolk Biological Records Centre

Field Surveys

- 2.2 A strategic reptile presence/absence survey was undertaken at the site in specific locations identified as offering potential habitat. The survey was undertaken based on methodology detailed in the Herpetofauna Workers Manual (Gent and Gibson, 1998) and the Froglife Advice Sheet 10 - Reptile Survey (Froglife 1999). Methods involved a search for basking reptiles on/under naturally occurring and strategically positioned artificial refugia. These were placed in locations that offered the most suitable habitat for common reptiles, i.e. structurally diverse 'edge' habitats with areas of bare ground/short vegetation.
- 2.3 A total of 215 artificial refugia (0.5m² sections of roofing felt) were placed within the site in habitats considered most suitable for reptiles. Suitable habitats mainly consisted of south facing field margins, hedgerows and woodland edges. This is in accordance to the Froglife Advice Sheet 10 (1999) which recommends that refugia should be placed at a density of 10 per ha of suitable habitat.
- 2.4 Seven survey visits have been undertaken throughout the 2014 survey season. Each survey visit was undertaken in accordance with guidelines as follows:
- At temperatures of between 9°C - 20°C;
 - On sunny / cloudy days with little or no wind;
 - Before 1100 hours and after 1600 hours.
- 2.5 In addition, the surveys also followed the guidelines recommendations by:
- Approaching refugia from downwind and avoiding casting a shadow and with care so as to not disturb basking animals when checking;
 - That lifting and replacing tins, to check for the presence of reptiles underneath in hot weather is undertaken with care, to avoid potential harm to any animals underneath.

Table 1: Survey Dates and Conditions

Survey Date	Survey Timing	Weather Conditions
24.06.14	09:30	17°C, 40% cloud, light breeze, no rain
01.07.14	08:00	14-17°C, 5% cloud, no wind or rain
07.08.14	17:30	22°C, 40% cloud cover, light breeze, no rain
14.08.14	10:00	20°C, sunny spells with heavy rain showers, light breeze
04.09.14	07:45	17°C, no cloud, wind or rain
23.09.14	10:30	14°C, no cloud, wind or rain
25.09.14	08:30	15°C, sunny spells, light breeze, no rain

- 2.6 Reptile populations, if confirmed, were assessed in accordance with population level criteria as stated in the Key Reptile Site Register (Froglife). This system classifies populations of individual reptile species into three population categories assessing the importance of the population (Table 2). These categories are based on the total number of adult animals observed during individual survey occasions.

Table 2: Key Reptile Site Survey Assessment Categories (Froglife 1999)

Species	Low Population (No. of individuals)	Good Population (No. of individuals)	Exceptional Population (No. of individuals)
Adder	<5	5 - 10	>10
Common lizard	<5	5 - 20	>20
Grass snake	<5	5 - 10	>10
Slow-worm	<5	5 - 20	>20

Constraints

- 2.7 One survey was conducted at 22°C which is slightly above the guidelines detailed in the Herpetofauna Workers Manual (Gent and Gibson, 1998) and the Froglife Advice Sheet 10 - Reptile Survey (Froglife 1999) which recommends a maximum temperature of 20°C. However, all other conditions were considered appropriate and peak adult counts for common lizard and grass snake were observed during optimal survey conditions. Therefore, it is considered that the conditions are unlikely to significantly affect the final outcome of the population assessment and the survey effort is sufficient to provide a robust assessment.

3.0 RESULTS

Consultation Results

- 3.1 Five records of common lizard *Zootoca vivipara* were recorded, four were within or near Haverhill Railway Walks LNR/Haverhill Disused Railway CWS these ranged between 270m to 957m from the Application Site; the fifth record was recorded within a 1km square to the west of the Application Site within the residential estate. Three slow-worm *Anguis fragilis* and one grass snake *Natrix natrix* were also recorded in the same areas as above. The above records were dated between 2003 and 2006.

Field Surveys (Figure 1)

- 3.2 The majority of habitats within the site comprise arable land. Other habitats comprise improved grassland, scrub, semi-improved grassland, tall ruderal vegetation, hedgerows, ponds, stream, ditches and mixed / broad leaved woodland.
- 3.3 The peak count of adult common lizards was eight which occurred on the 25th September 2014; similar numbers were recorded for juveniles 18th August 2014 (Table 3). The population numbers recorded within the site would suggest a 'good population' in accordance with the survey assessment category (Froglife 1990).
- 3.4 Grass snakes were identified within three different locations during the surveys, however during each survey only a peak count of one adult individual was recorded in June, August and September; this categorises the grass snake population as 'low'. One juvenile grass snake was observed on 7th August along the woodland belt which backs onto the watercourse which runs through the middle of the site; however no adults were seen at this location.
- 3.5 The peak count for slow worms was one adult, observed on 7th August along the woodland belt backing onto the central watercourse, this is therefore categorised as a 'low' population.

Table 3: Survey Results 2014

Survey Occasion	Date	Grass Snake adult	Grass Snake juvenile	Common Lizard adult	Common Lizard juvenile	Slow Worm adult	Slow Worm juvenile
1	24.06.14	1	0	1	0	0	0
2	01.07.14	0	0	0	0	0	0
3	07.08.14	0	1	1	0	1	0
4	14.08.14	1	0	3	8	0	0
5	04.09.14	1	0	3	4	0	0
6	23.09.14	0	1	2	0	0	0
7	25.09.14	0	0	8	3	0	0

4.0 DISCUSSION & RECOMMENDATIONS

- 4.1 All common reptile species, including common lizard, grass snake and slow worm are partially protected under Section 9(1) and 9(5) of Schedule 5 of the Wildlife and Countryside Act 1981 (as amended). This legislation protects these animals from:
- Intentional killing and injury;
 - Selling, offering for sale, possessing or transporting for the purpose of sale or publishing advertisements to buy or sell a protected species.
- 4.2 All common reptile species, including common lizard, grass snake and slow worm are species of principal importance under S41 of the NERC Act, these are also Suffolk BAP species.
- 4.3 The habitats within the main body of the site were dominated by arable fields along with woodland compartments, dry ditches and hedgerows. The main habitats assessed as having the potential to support reptile populations are the hedgerows with associated margins. Current development proposals retain much of these habitats and as part of the green infrastructure (GI) such habitats will be strengthened and linkages to surrounding areas enhanced.
- 4.4 Grass snake and slow worm peak count was one adult which represents a 'low' population. The peak common lizard count was eight adults, which falls just inside a 'good' population classification in accordance with the Key Reptile Site Register (Froglife 1999). These sightings were recorded along hedgerows, field margins and along woodland edges that occur throughout the site.
- 4.5 The total development area is 168.34ha, which will see residential housing, local centers, employment and schools built within the field compartments whereby the majority of the existing linear features such as hedgerows will be retained. There is likely to be small losses for hedgerows and small section of tree groups to enable access into the site, this will be limited and compensatory habitat created. Where habitats used by reptiles exist mitigation measures will be put into place to ensure that no offence is caused under the Wildlife & Countryside Act, this will include passive displacement and fencing off sensitive areas. The current frameworks plan indicates that there will be approximately 198m loss of hedgerows, these losses all currently occur within central regions away from the known reptile populations. The only exceptions are along H4, H11, H14 and H23, where hedgerow loss will potentially have a conflict with reptiles; however as there are immediate habitats surrounding them displacement will be the most suitable method to void injury or death to individuals.
- 4.6 Proposed GI will increase habitats around the development edges with additional woodland planting occurring near hedgerow H2, H11, and H18, this will increase the area of habitat that will be usable to reptiles; although it will take a number of years for these to develop they will increase the linkages around the peripheries of the site potential enabling populations to merge. Approximately 80.19ha of GI will be created within the development, this will include a corridor of GI that runs parallel to the watercourse, this will include existing features but ensure that there are expanses of habitat that will favour wildlife species which were previously absent.
- 4.7 All the areas where reptiles have been recorded are included within the GI areas, these will undergo enhancements with hibernaculum created to enable refuge, shelter and hibernation opportunities away from residential areas. The green corridors will link to larger areas, which will have multiple uses amenity, access and conservation; here habitats will be created that have a tussocky grassland structure with a wildflower mixes near footpaths, this will provide the nectar

sources for invertebrate/prey items, basking areas and safe passages through undergrowth. Where tree removal is required the trunks will be kept and cut up and arranged within retained habitats, these will create basking opportunities, refuge and as they rot provide a foraging resource.

- 4.8 Management of grassland will be important for the longevity of suitable habitats, here cutting regimes should be rotated whereby only small parcels of a compartment are cut in one year, this will enable a shallow litter layer that will provide refuge for reptiles, however still maintain diversity of species. Ideally grassland mixes should include crested dogtail *Cynosurus cristatus*, Cocksfoot *Dactylis glomerata*, red fescue *Festuca rubra* and have wildflower mixes to include common knapweed *Centaurea nigra*, greater knapweed *Centaurea scabiosa* oxeye daisy *Leucanthemum vulgare*, wild carrot *Dipsacus fullonum* and tufted vetch *Vicia cracca*.

5.0 MITIGATION STRATEGY

Objectives

- 5.1 The mitigation strategy is based upon current best practice guidelines and comprises the following objectives;
- Passive displacement of reptiles in areas where development works affect good reptile habitat;
 - Removal of existing reptile habitat to prevent relocation;
 - Enhancement and management of existing habitats and new green infrastructure;
 - Monitoring of displaced populations to inform the management scheme.

Passive displacement

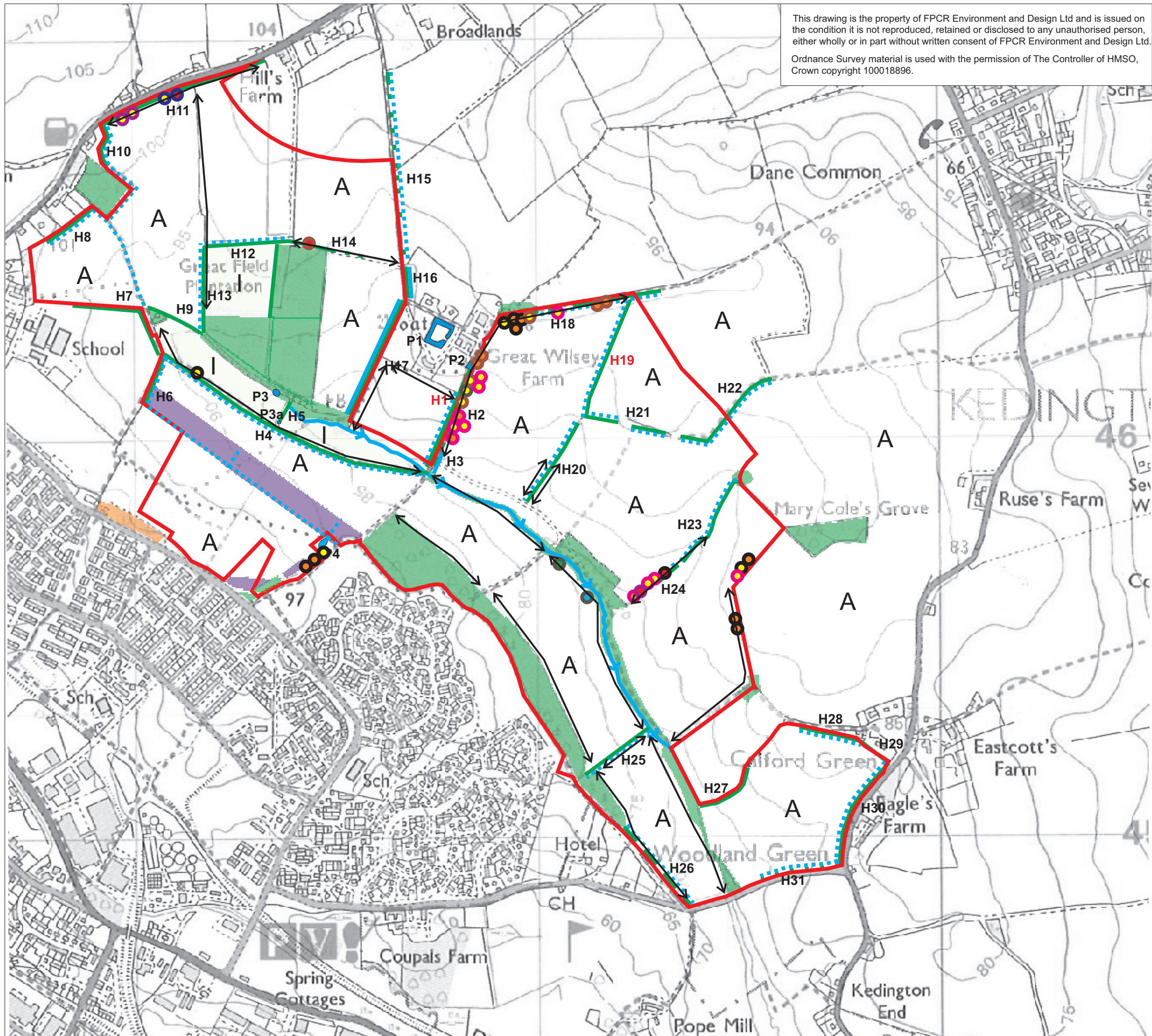
- 5.2 Passive displacement involves the intensive management of the existing habitats, through number of cutting regimes which will encourage any reptiles to move away from such areas. The undertaking of displacement should occur well before any development is undertaken. Such works will only be affective when reptiles are active (between mid-March and October), therefore such works should be scheduled to occur in the spring/summer months before works begin. The works will also be dependent on weather conditions as it must be warm and free from rain, for it to be successful.
- 5.3 Care will need to be taken to avoid injuring reptiles, therefore any habitats which need to be cleared in preparation for construction should be cut using hand-strimmers, the first cut should be limited to 200mm. Strimming should take place in one direction towards suitable habitat, with the desired effect to push reptiles into areas of undisturbed suitable habitat away from development works. Areas initially cut to 200mm should then be left for 24 hours and then cut to 100mm, followed by a cut as short as possible. All scrub, brash and strimming debris will need to be removed by hand to avoid creating places of refuge. All grass and scrub arising's will be completely removed from the working area to prevent them from being used by reptiles. In the event of any delay the vegetation should be maintained as short as possible to prevent reptiles from returning to the area. A fingertip search of the working area should be made immediately prior to any ground works to ensure that reptiles are absent.
- 5.4 The displacement of individuals into the surroundings will ensure that the population can be sustained into the future. The surrounding habitats consist of similar habitat types as those that currently exist within areas that are going to be lost. The retained hedgerows and woodland habitats which occur on the site provide refuge and hibernation opportunities. Management of grassland will be important for the longevity of suitable habitats, here cutting regimes should be rotated whereby only small parcels of an compartment are cut in one year, this will enable a mat

Destructive Search and Habitat Modification of Existing Reptile Habitats

- 5.5 Following the passive translocation exercise the areas of proposed works will be stripped to further reduce the suitability of the existing habitats to support reptiles, in order to prevent recolonisation of the working areas by reptiles.

- 5.6 All translocation and destructive search works would be undertaken by or under the supervision of a suitably qualified ecologist during the active reptile season and during suitable weather conditions (April to October and temperatures above 10°C with no rain).

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- Site Boundary
- A Arable Fields
- Semi-Natural Broadleaf Woodland
- I Improved Grassland
- New Plantation Woodland
- Amenity Grassland
- H1 Hedgerow with Reference
- P2 Pond
- Watercourse
- Dry Ditch
- Wet Ditch
- ↗ Reptile Mat Location

- Date of Reptile Survey**
- 24.06.14
 - 07.08.14
 - 14.08.14
 - 04.09.14
 - 23.09.14
 - 25.09.14

- Reptile Species**
- Adult Common Lizard
 - Juvenile Common Lizard
 - Adult Grass Snake
 - Juvenile Grass Snake
 - Adult Slow Worm

Hallam Land Management Ltd
 Great Wilsey Park,
 Haverhill, Suffolk

fpcr PHASE ONE HABITAT & PROTECTED SPECIES PLAN

Not to scale AA / DAH 19.08.2015



Figure 1 5055-E-01