Reptile Survey

Haverhill Business Park, Haverhill

For Hammond Rutts Investments Limited

Delta Simons Project No. 15-0210.03

Issued: August 2015

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EXECUTIVE SUMMARY

REPTILE SURVEY

HAVERHILL BUSINESS PARK, HAVERHILL

DELTA SIMONS PROJECT No. 15-0210.03

Purpose	Delta-Simons Environmental Consultants Ltd was commissioned by Hammond Rutts Investments Limited ('the Client') to undertake a reptile survey at an area of land situated off Bumpstead Road, to the south of Haverhill on the Suffolk/ Essex border ('the Site'). The aim of the survey was to determine the presence or likely absence of reptiles on-Site in order to support a planning application for the Site. The requirement of the survey has arisen following completion of an Extended Phase 1 Habitat survey of a wider area of land (see Delta-Simons 15-0210.01), which identified this area as supporting suitable habitats for reptiles. Furthermore, it is understood that as part of previous proposals for the Site, reptiles were translocated from the proposed development area to a receptor site on-Site, however, the reptile fencing separating the two areas has since fallen into disrepair.
Current Site Status	The Site is characterised by an area of land subdivided into two development plots. The north-east 1 (NE1) and north-east 2 (NE2) plots that have been identified as supporting suitable reptile habitats, are situated to the east of Bumpstead Road, whilst land to the west of the Road was not considered suitable to support reptiles. This area of the Site supports an earth mound covered with limited grassland, and sections of bare ground. Plantation woodland lies in the northern extent of the Site. There are also areas of scrub and grassland along with hedgerow boundaries, and scattered trees along the western edge of the land. There are drains supporting standing water to the west of the Site, and a small pond within the southern area.
Proposed Development	It is understood that the proposed development is for light industrial use, and will comprise seven building plots for warehouses and offices. The proposals have not yet been finalised.
Results:	Slow worms were found on-Site in medium numbers. Common lizards and grass snakes were found on-Site in low numbers. The reptiles were predominantly found to the west and east of the Site.
Recommendations	<u>Recommendation 1 (Reptile Translocation)</u> Given the presence of reptiles within land to be developed, it is recommended that a translocation programme is undertaken in order to move the reptiles to the receptor site within the northern area of the Site, which was used for a previous translocation scheme. This will ensure that reptiles are not harmed by the development proposals. The translocation must be completed between April – late September/ early October, during suitable weather conditions, and before reptiles enter hibernation. This would involve the check of artificial refugia for a minimum period of 30 working days, and until five clear days have passed with no reptiles captured during checks completed under suitable weather conditions. Any reptiles found will be captured and then released into the translocation area. The proposed development area will then be destructively searched by suitably qualified ecologists, and clearance of all suitable areas of reptile habitat undertaken under their supervision. Prior to commencement of the translocation, the receptor site must be re-fenced and vegetation management works completed to make it suitable for reptiles.

	Recommendation 2 (Reptile Exclusion Fencing) Due to the suitability of habitats within Haverhill Railway Walks Local Nature Reserve (LNR) for reptiles, which is situated adjacent to the eastern Site boundary, it is recommended that reptile exclusion fencing is used along the eastern Site boundary to prevent any reptiles entering the Site from that direction.
This Reptile Survey Report Executive Summary is intended as a summary of the assessment of the Site based on information received by Delta-Simons at the time of production. The Executive Summary should be read in conjunction with the full report.	

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1.0 INTRODUCTION

1.1 Context and Purpose

Delta-Simons Environmental Consultants Ltd was commissioned by Hammond Rutts Investment Limited ('the Client') to undertake a reptile survey of land off Bumpstead Road to the south of Haverhill on the Suffolk/ Essex border (hereafter referred to as 'the Site'). The Site comprises an area of land subdivided into two development plots. The north-east 1 (NE1) and north-east 2 (NE2) plots are situated to the east of Bumpstead Road and support suitable habitats for reptiles, whilst land to the west of the road was not considered suitable for these species.

The requirement for the survey follows the recommendations of the Extended Phase 1 Habitat Survey undertaken by Delta-Simons in March 2015 (Delta-Simons Project no. 15-0210.01), and it was undertaken in order to support a planning application for the Site. A previous report in 2007 (Reptile Translocation Strategy, Phase 1 Haverhill Business Park, Haverhill, Suffolk by James Blake Associates) for the Site to support earlier development proposals indicates that a reptile translocation was undertaken on the Site and all reptiles found moved into the northern area of the Site, which was fenced as a receptor area, but the fencing is now defunct and reptiles may have re-entered the Site.

The purpose of the reptile survey was to:

- Determine the presence or likely absence of reptiles and the specific species, where present, at the Site;
- Make an assessment of the size of any reptile populations present;
- If reptiles are present determine the extent of the impact of the proposals on the population(s); and
- Provide recommendations for further surveys and/ or mitigation measures that may be necessary.

The Site location is shown in Figure 1.

1.2 Site Description

The Site is centred at Ordnance Survey (OS) grid reference TL 67801 44256 to the south of Haverhill. The Site covers an area of approximately 7.1 hectares and comprises an area of land subdivided into two development plots. The NE1 and NE2 plots are situated to the east of Bumpstead Road and were the subject of the reptile survey. This area of the Site supports an earth mound covered with limited grassland and sections of bare ground. Plantation woodland lies within the northern extent of the Site. There are areas of scrub and grassland, whilst there are also hedgerow field boundaries and scattered trees along the western edge of the land. There are also drains supporting standing water to the west of the Site, and a small pond within the southern area.

The Site is located within a business park with a hotel, public house and warehouse situated to the east of the Site. To the south of the Site is the A1017 with farmland beyond and to the west are further industrial buildings. North are a mixture of industrial, commercial and residential properties. To the east is a Local Nature Reserve (LNR) supporting woodland, beyond which are further industrial units. Residential properties occur to the north-east of the Site.

Topographically much of the Site varies in height, with the steep sloping banks of the earth mounds present within the plots.

The Site layout is shown in Figure 2.

1.3 Proposed Development

It is understood from the Client that the seven plots are for light industrial use and will support a mixture of warehousing and offices. The plans have not yet been finalised for the Site.

2.0 LEGISLATION

2.1 Reptiles

All six native species of reptiles, including common lizard *Zootoca vivipara*, slow-worm *Anguis fragilis*, adder *Vipera berus*, grass snake *Natrix natrix,* smooth snake *Coronella austriaca* and sand lizard *Lacerta agilis* are protected under the 1981 Wildlife and Countryside Act (WCA) (as amended), from deliberate or reckless killing or injury. As such, all reasonable steps must be taken to avoid their incidental mortality when carrying out works.

Smooth snake and sand lizard receive further protection under the Conservation of Habitats and Species Regulations 2010, which makes it an offence to damage or destroy places that they use for breeding, resting, shelter and protection. It is also an offence to deliberately capture, injure or kill these species, and to intentionally or recklessly disturb them while occupying a structure or place it uses for shelter or protection; or to obstruct access to any structure or place which it uses for that purpose. Further it is illegal to damage/ destroy a breeding site or deliberately take/ destroy the eggs of such an animal.

2.2 Planning

The Office of the Deputy Prime Minister (ODPM) Circular (2005) advises that ecological surveys are undertaken before planning permission is determined. The circular states *"The need to ensure that ecological surveys are carried out should therefore only be left to coverage under planning conditions in exceptional circumstances"* (see References, Appendix I).

3.0 METHODOLOGY

3.1 Desk Search

The results of the data search received from the Suffolk Biological Records Centre (SBRC) and Essex Ecology Services Limited (EECOS) for the initial Extended Phase 1 Habitat Survey (Delta-Simons Project no. 15-0210.01) were reviewed.

In addition, a search for designated sites for reptile populations on or within 2 km of the Site was performed using the Multi-Agency Geographic Information for the Countryside (MAGIC).

3.2 Review of Previous Surveys

Where possible, information was gathered on any previous surveys that have been conducted at the Site and the results and conclusions were reviewed. The following survey reports were reviewed:

- Reptile Survey, Phase 2 Haverhill Business Park, Haverhill, Suffolk, 22nd September 2006 by James Blake Associates; and
- Extended Phase 1 Habitat Survey, Haverhill Business Park, Haverhill, March 2015 by Delta-Simons.

3.3 Habitat Suitability Assessment

An initial walkover of the Site was undertaken in order to assess the different habitat types present and to determine areas of habitat suitability for reptiles at the Site. An assessment was made of the micro-habitats present which informed the most appropriate and effective placement of artificial refugia across the Site.

3.4 Reptile Survey

Survey methodologies followed recommendations in the Herpetofauna Workers' Manual (Gent & Gibson 2003) and comprised the placement and seven checks of artificial refugia within areas of suitable reptile habitat across the Site.

A total of 150 artificial refugia were placed at the Site in order to ensure a minimum density of 10 refugia per hectare as recommended by the Herpetofauna Groups of Britain and Ireland (HGBI, 1998). These comprised a mixture of corrugated bitumen roofing sheets, corrugated metal sheeting and roofing felt tiles, each measuring 0.5 m x 0.5 m. After allowing 14 days for the artificial refugia to settle into the sward they were all checked, above and below, on seven separate occasions for reptiles. In addition to checking artificial refugia, a cold search of natural refugia and on-Site debris was also undertaken during each check. This involved any rocks or debris being overturned to check for reptiles. Any reptiles found were identified and where possible a rough age category and sex was determined. The location of any reptiles found was recorded in order to determine the general usage of the Site by reptile species.

The survey was undertaken by a suitably qualified ecologist during appropriate weather conditions between 24th June and the 24th July 2015. A viable survey was considered to be within a temperature range of between 10 - 20 ºC (Edgar *et al.,* 2010) with no heavy rain or considerable overnight frost.

3.5 Reptile Population Assessment

Estimating reptile population size from refugia surveys can be difficult (see 6.0 Limitations). However, an assessment of whether or not the population is likely to be significant within the local area was undertaken based on the numbers of reptiles recorded over the survey visits, the density of refugia used, and the overall size of the Site and surrounding suitable habitat.

4.0 RESULTS

4.1 Desk Search

A review of the data search, undertaken by SBRC and EECOS during the previous Extended Phase 1 Habitat Survey and the MAGIC data search revealed that there are no statutory designated sites on or within a 2 km radius of the Site that are designated for reptile populations.

One Local Nature Reserve (LNR), Haverhill Railway Walks, was identified adjacent to the eastern Site boundary. This covers approximately 5 km of former railway line and provides a wildlife corridor in the south and east of Haverhill.

Three County Wildlife Sites (CWS), non-statutory designated sites, were identified within the search area, all of which are known to, or may support reptiles. Bumpstead Road Grassland forms the northern section of the Site. It was designated for supporting a wide range of flowering plants, including the scarce sulphur clover *Triflolium ochroleucon*, and is an extension of the Railway Walks Nature Reserve. The site was designated in 1996 and is now overgrown with dog rose *Rosa canina* and hawthorn *Crataegus monogyna*, such that conditions for the clover plant are not considered suitable and it is considered unlikely that it will, therefore, still be present, however, any ground flora below the scrub could not be clearly viewed due to its density.

The second CWS is Haverhill Disused Railway, approximately 475 m north-east of the Site, which forms most of the Railway Walks and contains a mosaic of habitats supporting birds and reptiles. The third CWS is Broadstreet OId Allotment approximately 2 km north of the Site centre, which is known to support reptiles, including breeding slow worm *Anguis fragilis*, birds and common frog *Rana temporaria* and common toad *Bufo bufo*.

Three Local Wildlife Sites (LWS), all lowland mixed deciduous woodland, were also included within the data search results. These are not recognised as being suitable for reptiles.

From 2006 there were four records of common lizard *Zootoca vivipara* and two records of slow worm, the closest record of each was from 300 m north-east of the Site. The locations

of these records are in an area with good connectivity to the Site for reptile species via the CWS Haverhill Disused Railway and Haverhill Railway Walks LNR.

4.2 Review of Previous Surveys

The reptile study conducted in 2006 found that both common lizard and slow worm were present in the eastern area of the Site. Over five visits a medium population of both species was identified with the counts of slow worms varying between 4 and 14 between survey visits, and common lizard between 12 and 22. A reptile translocation strategy was finalised in January 2007, however, the translocation report was unavailable for a review of it to be completed, such that it is not known currently how many reptiles, and what species, were translocated into the receptor site (Reptile Translocation Strategy, Phase 1 Haverhill Business Park, Haverhill, Suffolk, 31st January 2007 by James Blake Associates).

Since the reptile fencing on the perimeter of the previous reptile receptor site was highlighted as being in a state of disrepair in the Delta-Simons Extended Phase 1 Habitat survey report (15-0210.03), and the habitats within the proposed development area considered ideal to support reptiles, further reptile surveys were recommended due to the likelihood of the translocated reptiles having previously dispersed back onto the proposed development land, and also, the potential for them to access the Site from the adjacent LNR to the east.

4.3 Habitat Suitability Assessment

There are a mosaic of habitats on-Site which make the Site suitable for reptiles. The scrub and wooded areas provide shelter and hibernation opportunities whereas the short grassland and earth mounds are ideal for basking reptiles during the spring and summer months. The grassland and scrub on-Site support numerous invertebrate species which were noted during the surveys, and provide foraging opportunities for potential reptiles on-Site.

Following this assessment of habitat suitability during a walkover of the Site, the artificial refugia were placed in a variety of micro-habitats across the Site. Their locations are shown in Figure 2 and habitat details are given in Table 1 below. Photographs of the micro-habitats across the Site are found in Appendix II.

Table 1: Number of Refugia Placed within each Microhabitat Type

Group	Micro-Habitat	Number of Refugia
A	Grassland with areas of dense scrub	30
B	Woodland edge habitat	25
C	Scrub with young self-seeded trees	30
D	Sparse grassland and scrub at the foot of a steep slope	25
E	Grassland with marshy grassland patches	40

4.4 Refugia Survey

Slow worm, common lizard and grass snake *Natrix natrix* were recorded on-Site during the seven survey visits. The highest reptile counts were made on Visits 2 and 3 when the refugia were being used by the reptiles to increase their body temperatures due to cloud cover, although, the same did not apply to Visit 6 when it was also overcast since low numbers were recorded, however, this may have been due to a slightly higher temperature.

A medium population of slow worm was recorded, with a peak count of 11 they were commonly found in areas A, D and E. Both sexes and juveniles were identified during the survey visits which indicated they are breeding either on or within habitats adjacent to the Site.

Common lizard were found in low numbers during six of the seven survey areas, with a peak count of 5 indicating a small population. A number were recorded on top of the refugia mats rather than underneath them, and all were too quick to successfully catch and sex. Common lizards were found in all of the areas on-Site, however, higher numbers were found in A, D and E.

Grass snakes were found in low numbers around area D, with a peak count of 1 indicating a small population to be present on-Site. Here they could shelter within the scrub bordering this compartment but also bask on the areas of ground with limited vegetation.

Over the seven visits, higher numbers of reptiles were recorded in areas A, D and E than in other areas where the refugia had been placed.

The dates the survey checks were undertaken and weather conditions are given in Table 2, whilst the numbers of reptiles found within each micro-habitat group are presented in Table 3.

Table 2 – Survey Timings and Weather

Reptile Check	Date	Start Time	Weather Conditions	Cloud Cover	Temperature	Wind
No. 1	24/06/2015	10:00	Dry	50%	14ºC	F1-2
No. 2	07/07/2015	09:40	Dry, overcast	100%	18ºC	F2
No. 3	09/07/2015	09:15	Dry	70%	12ºC	No wind
No. 4	13/07/2015	09:00	Dry, damp on the ground	50%	17ºC	F1
No. 5	16/07/2015	07:00	Dry	80%	14ºC	No wind
No. 6	22/07/2015	10:00	Dry	75%	18ºC	No wind
No. 7	24/07/2015	07:00	Dry	60%	14ºC	No wind

Table 3: Reptile Survey Results

Area / Visit	A	B	C	D	E	**TOTAL**
1	1 ASW 1 JSW	2 ACL	X	1 ASW 1 AGS	1 ACL	**3 ASW** **1 JSW** **3 ACL** **1 AGS**
2	2 ACL 3 ASW	X	X	1 ASW 2 JSW 1 AGS 1 ACL	1 JSW 1 ACL	**5 ASW** **2 JSW** **4 ACL** **1 AGS**
3	2 ASW 4 JSW 2 ACL	X	X	1 JSW 1 ACL	1 ASW 3 JSW 2 ACL	**3 ASW** **8 JSW** **5 ACL**
4	3 ASW 1 ACL	X	X	1 ACL 1 AGS	2 ACL 1 ASW	**4 ASW** **4 ACL** **1 AGS**
5	2 ASW	X	1 ACL	1 ACL	1 ASW	**3 ASW** **2 ACL**
6	1 ACL	X	X	X	1 ASW	**1 ASW** **1 ACL**
7	2 ASW 1 ACL	X	X	1 JSW	2 JSW	**2 ASW** **3 JSW**

NB: All reptiles found were common lizard; M = Male, F = Female, A = Unidentified gender, J = Juvenile, X = No reptiles found

4.5 Reptile Population Assessment

Although it is difficult to accurately estimate the reptile population size at the Site from the survey results, when the number of adults recorded, the number of refugia used and the overall area of the Site is taken into account, it is considered likely that the Site supports a medium population of slow worm, and low populations of common lizard and grass snake, with grass snake being less abundant than the other two species.

Due to the re-establishment of a viable population of reptiles across the eastern area of the site, a translocation exercise will be needed in order to ensure that reptiles are not

harmed as a result of the development proposals. Since there has been no habitat management or fencing maintenance since the initial translocation, works will be required to re-instate the previous receptor site (see Figure 3).

5.0 CONCLUSIONS AND RECOMMENDATIONS

5.1 Conclusion

The Site is characterised by an area of land subdivided into two development plots. The NE1 and NE2 plots are situated to the east of Bumpstead Road, and these plots were the subject of the reptile survey since they were found to support ideal habitat for reptiles, with the grassland and woodland providing good cover and foraging opportunities, whilst the soil mounds and rubble piles offered shelter and basking opportunities. The results of a previous survey of this area undertaken in 2006 found medium populations of common lizard and slow worm to be present, and from the results of the desk search, these species are known to also occur within the wider area to the north and east of the Site. It is understood that reptiles were translocated off the previously proposed development areas to a receptor site within the northern extent of the Site, however, as the development was never completed the reptile fence fell into disrepair.

Slow worm, common lizard and grass snake were all recorded during the 2015 reptile survey. A medium population of slow worm was recorded with peak count of 11. A small population of common lizard were recorded with a peak count of 5. Both slow worms and common lizards were mainly found in areas A, D and E. A small population of grass snake was also recorded, with the peak count lower than that of the other two species (1), while this species was only recorded in area D.

The proposed development has the potential to harm reptiles present at the Site if appropriate mitigation measures are not followed. A translocation will be required to remove them from the area of the Site that is proposed for development. The original receptor site is currently overgrown with scrub, and will require habitat management and a new reptile fence around the perimeter in order to be reused as a receptor site. Furthermore, in order to prevent reptiles re-entering the Site from off-Site habitats to the east associated with the LNR, a further section of fencing will be required along the eastern Site boundary.

5.2 Recommendations

Recommendation 1 (Reptile Translocation)

- A translocation programme is recommended in order to move any reptiles from the proposed development area into the previously used receptor site, in order to ensure that they are not harmed by the development proposals;
- Prior to commencement of the translocation works, the previously used receptor site will require re-fencing and vegetation management works to be completed make it suitable to support reptiles again;
- The capture programme must be completed between April – late September/ early October during suitable weather conditions, and before reptiles enter hibernation. This would involve the check of artificial refugia for a minimum period of 30 working days, and until five clear days have passed with no reptiles captured during checks completed under suitable weather conditions;
- Any reptiles found will be captured and then released into the translocation area; and, following completion of the translocation; and
- The proposed development area will then be destructively searched by suitably qualified ecologists, and clearance of all suitable areas of reptile habitat undertaken under their supervision.

Recommendation 2 (Reptile Exclusion Fencing)

Due to the suitability of habitats within Haverhill Railway Walks LNR for reptiles, which is situated adjacent to the eastern Site boundary, it is recommended that reptile exclusion fencing is used along this boundary to prevent any reptiles entering the Site from off-Site habitats.

6.0 LIMITATIONS OF THE SURVEY

Each reptile survey visit reveals only a sample of the population and the proportion of the population recorded varies according to complex weather conditions both during the survey and the days immediately preceding the survey and, therefore, estimating population size can be difficult.

The behaviour of animals can be unpredictable and may not conform to characteristics recorded in current scientific literature. This Report, therefore, cannot predict with absolute certainty that animal species will occur in apparently suitable locations or habitats or that they will not occur in locations or habitats that appear unsuitable.

The recommendations contained in this Report represent Delta-Simons' professional opinions, based upon the information referred to in Section 4 of this Report, exercising the duty of care required of an experienced Ecology Consultant.

This Report was prepared by Delta-Simons for the sole and exclusive use of the Client and for the specific purpose for which Delta-Simons was instructed as defined in Section 1 of this Report. Nothing contained in this Report shall be construed to give any rights or benefits to anyone other than the Client and Delta-Simons, and all duties and responsibilities undertaken are for the sole and exclusive benefit of the Client and not for the benefit of any other party. In particular, Delta-Simons does not intend, without its written consent, for this Report to be disseminated to anyone other than the Client or to be used or relied upon by anyone other than the Client. Use of the Report by any other person is unauthorised and such use is at the sole risk of the user. Anyone using or relying upon this Report, other than the Client, agrees by virtue of its use to indemnify and hold harmless Delta-Simons from and against all claims, losses and damages (of whatsoever nature and howsoever or whensoever arising), arising out of or resulting from the performance of the work by the Consultant.

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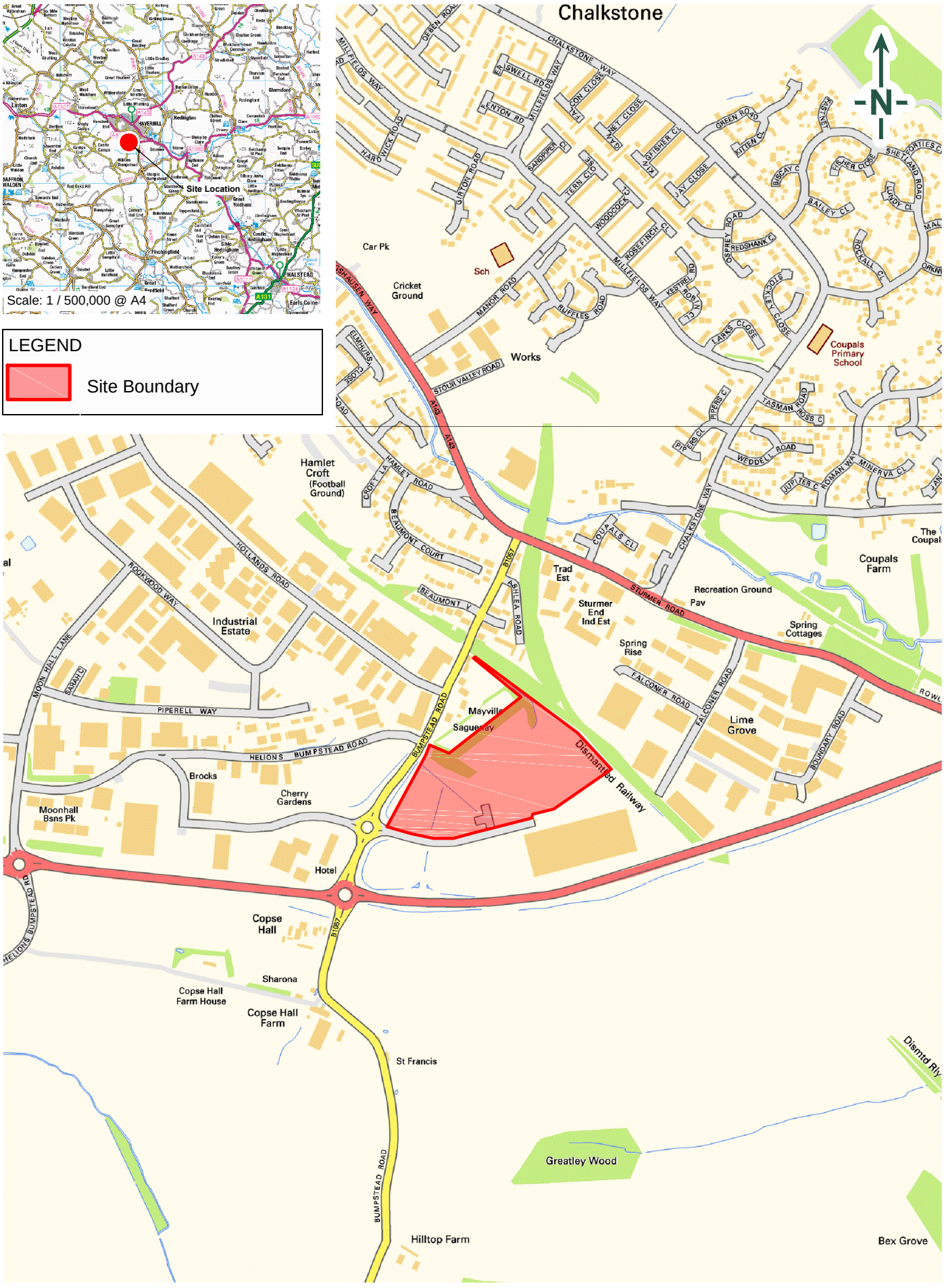
Figures

LEGEND

Site Boundary



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deltasimons

TITLE:
Site Location Map
Haverhill Business Park
Haverhill

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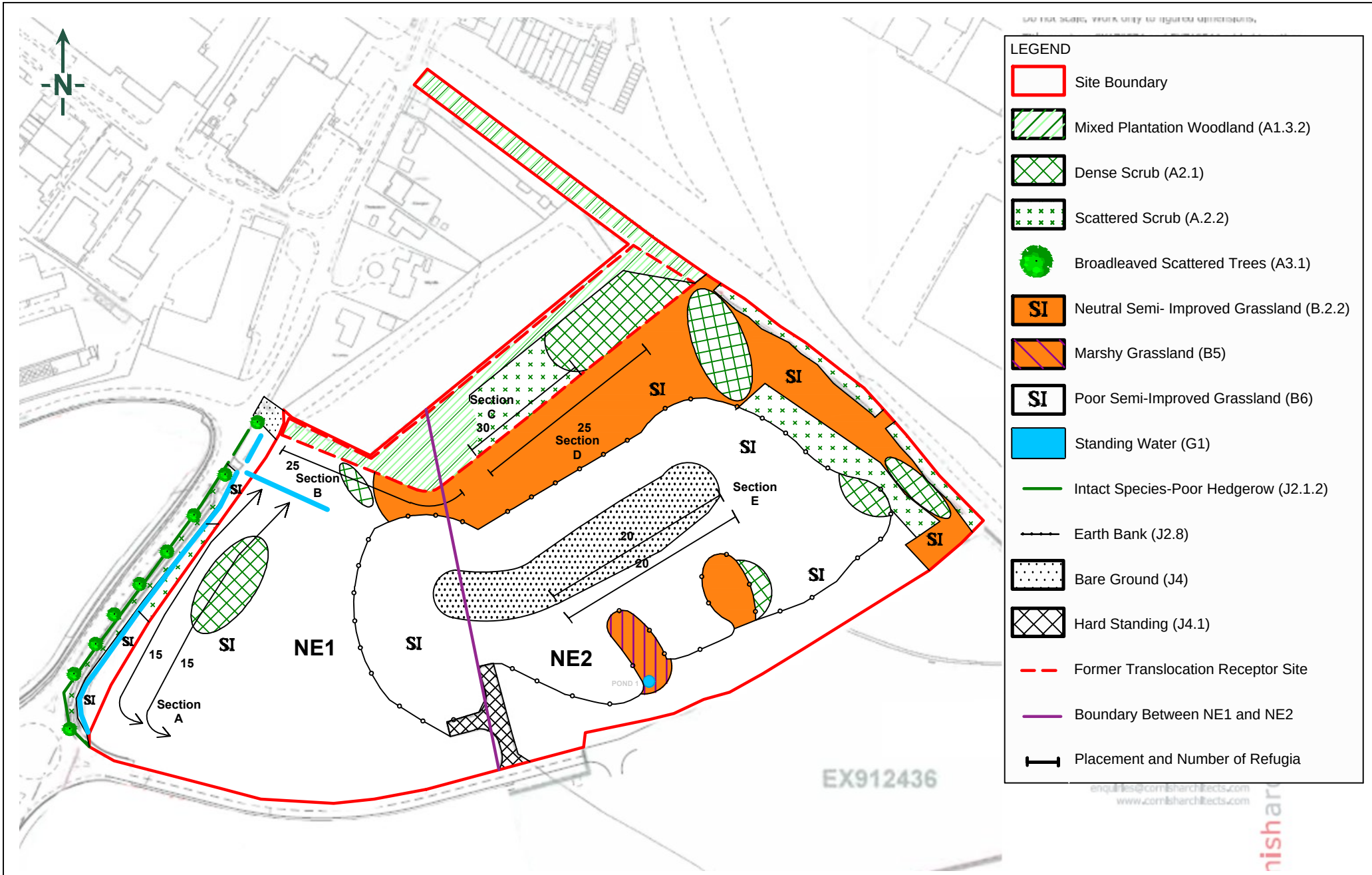
CHECKED BY: AC	REVISION: 1
DATE: 23 July 2015	

PROJECT NO: 15-0210.03

FIGURE NO: 1

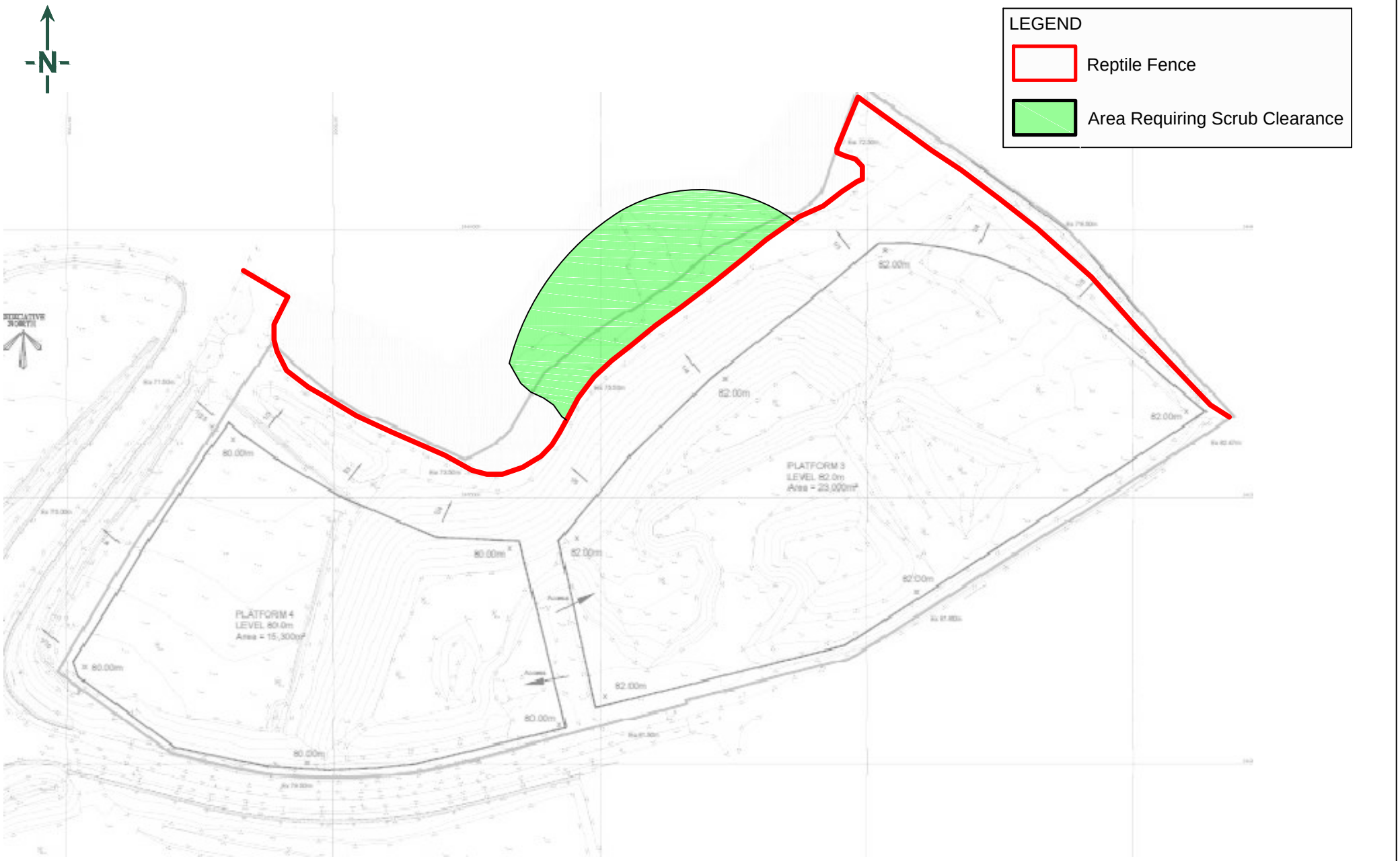


deltasimons

TITLE:
Site Layout and Location of Artificial Refugia
Haverhill Business Park
Haverhill

DRAWN BY: DP	SCALE: Not to Scale
CHECKED BY: CB	REVISION: 1
DATE: 23 July 2015	

PROJECT NO: 15-0210.03
FIGURE NO: 2



deltasimons

TITLE:
Location of the Proposed Reptile Fenceline and Area Requiring Scrub Clearance
Haverhill Business Park
Haverhill

DRAWN BY: DP	SCALE: Not to Scale	PROJECT NO: 15-0210.03
CHECKED BY: AC	REVISION: 1	FIGURE NO: 3
DATE: 03 August 2015		

Appendix I

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Appendix II

Haverhill Business Park, Haverhill, CB9 7AA
Delta-Simons Project No. 15-0210.03

Photograph 1 – Area A

Photograph 2 – Area B

Haverhill Business Park, Haverhill, CB9 7AA
Delta-Simons Project No. 15-0210.03

Photograph 3 – Area C

Photograph 4 – Area D

Haverhill Business Park, Haverhill, CB9 7AA
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Photograph 5 – Area E