Preliminary Ecological Assessment of Glatton Hall, Glatton Way, Huntington, PE28 5RS.

Commissioned by Fortress Capital Advisors Ltd.

June 2020

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[redacted]

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Executive Summary

A Preliminary Ecological Assessment was carried out at Glatton Hall, Glatton Way, Huntington, PE28 5RS in January 2018. An update Preliminary Ecological Appraisal of the site was carried out on the 8th June 2020. The purpose of these surveys was to check for any ecological issues which might affect proposed development works on site.

Development proposals in 2018 were for the demolition of Glatton Hall and the construction of a 70-bed care home (Use Class C2) for residents requiring nursing, dementia, and residential care. Proposals also included a car parking area, landscaped gardens and a separate refuse/recycling facility. Proposals are now for the conversion of Glatton Hall into a single residential property. This will involve internal renovation works only with associated soft landscaping. No works to loft spaces will be undertaken.

The 2018 and 2020 surveys found the following constraints and subsequent surveys have been undertaken, also detailed below:

Constraints Identified in 2018	Subsequent Surveys Undertaken	Constraints Identified in 2020	Recommendation
[redacted]			
Roosting Bats - Considered unlikely that bats are roosting within the buildings on site. No further surveys for bats recommended on these buildings. Several trees within the site included features with moderate/high potential for roosting bats. Elevated inspection and/or emergence/return surveys recommended on trees T12, T20 and T66, due to be removed.	**Yes -** Bat emergence/re-entry surveys were undertaken on trees, due to be removed, in May and June 2018. No bats were seen emerging or re-entering the trees.	**Roosting Bats –** C.100 bat droppings (likely brown long-eared bat *Plecotus auritus*) recorded within loft space 2, building B1. No actual bats were recorded. Additional trees with potential bat roosting features identified within the woodland habitat.	**Trees - Further elevated inspections and/or emergence/re-entry surveys recommended,** if trees with potential bat roosting features are due to be removed. **Buildings -** Loft spaces will not be impacted by the proposed works; **no further surveys are therefore recommended.**

Constraints Identified in 2018	Subsequent Surveys Undertaken	Constraints Identified in 2020	Recommendation
Foraging and Commuting Bats – Suitable habitats on site comprises woodland and scattered parkland trees within the southern and eastern boundaries of the site. No significant increased light spillage onto the eastern and southern boundaries of the site where bats are most likely to forage and commute.	**No**	**Foraging and Commuting Bats-** Suitable habitats on site comprised tall grassland habitat, woodland and scattered parkland trees.	**No further surveys recommended –** During the construction and operational phase of the development lighting should be directed away from the eastern and southern boundaries of the site where bats are most likely to forage and commute.
Nesting birds - High potential for nesting on site, mainly during the peak nesting season (1st March and 31st August (inclusive)). Demolition of building on site and removal of suitable bird nesting vegetation to be undertaken outside the bird nesting season. Precautionary measures to be applied if building demolition and vegetation removal is undertaken during the nesting season. See report for more detail.	**No**	**Nesting birds -** High potential for nesting on site, within woodland, dense scrub, introduced shrub and grassland habitats, mainly during the peak nesting season (1st March and 31st August (inclusive)).	**Precautionary working measures recommended –** Under new site proposals only internal renovation works will be undertaken, loft spaces will not be impacted. Removal of suitable bird nesting vegetation to be undertaken outside the bird nesting season. Precautionary measures to be applied if vegetation removal is undertaken during the nesting season. See report for more detail.
Great crested newts - Moderate potential for great crested newts present within woodland habitat on site. If significant disturbance to the woodland habitat i.e. tracking of large vehicles and destruction of hibernacula, beyond the minor disturbance created through the removal of some trees, is required it is recommended that access to pond P3 is obtained to assess the its suitability for great crested newts.	**No**	**Great crested newts –** Moderate potential habitat for great crested newts present within woodland and tall semi-improved neutral grassland habitat on site.	**No further surveys recommended –** The woodland habitat will not be impacted as part of the proposed works other than minor disturbance created through removal of some trees. **Precautionary working measures recommended** when cutting/strimming tall semi-improved neutral grassland, tall ruderal habitat and scrub as part of general site maintenance. See report for further details.

Constraints Identified in 2018	Subsequent Surveys Undertaken	Constraints Identified in 2020	Recommendation
Reptiles - Low potential for reptiles to be present on site. Precautions required as detailed in this report	**No**	**Reptiles –** Moderate suitability for reptiles within tall grassland habitat on site and within woodland habitat.	**Precautionary working measures recommended,** when cutting/strimming tall grassland, tall ruderal and scrub as part of general site maintenance. See report for further detail.
Japanese knotweed or other important invasive species - None found.	**No**	**Japanese knotweed or other important invasive species -** None found.	**No further surveys required**

Workers should follow detailed guidance given in this report relating to the above to avoid breaching legislation regarding protected and invasive species.

1. Introduction

Surveyor

1.1 The surveyor and author of this report is Emma Reid MCIEEM, Senior Ecologist.

Client

1.2 Fortress Capital Advisors Ltd. instructed Green Shoots Ecology.

Site of proposed works

1.3 The site is located on Glatton Way, Huntington, PE17 5RS. It is approximately 1.1 hectares in area. The site currently contains the following habitats; Buildings, dense scrub, scattered scrub, hardstanding, introduced shrubs, mixed parkland scattered trees, mixed semi-natural woodland, semi-improved neutral grassland, standing water (currently dry) and tall ruderal vegetation.

Development proposals

1.4 Development proposals are for the internal refurbishment of Glatton Hall along with soft landscaping. No loft spaces will be impacted by the proposed works.

Survey Instructions

1.5 The survey was commissioned to identify any ecological constraints that should be considered when carrying out works in the area. Further surveying or mitigation works are recommended where relevant. If works are to be carried out any later than a year after this report then a second site visit is recommended so that an update to this report be carried out. A Preliminary Ecological Appraisal was carried out in order to provide the information required.

1.6 PEA guidelines are published by CIEEM (2013). PEA is based on Phase 1 Survey methodology, as described in the JNCC Handbook for Phase 1 Survey (2016). Its use allows habitat types on sites to be mapped. From this the ecological value of areas of a site can be ascertained. It can then be determined how likely it is that protected or otherwise notable species might occur on site. It also determines which areas on site might support protected species.

Survey Site Visit Date

1.7 8th June 2020.

2. Desk Study

2.1 A data search for protected and notable species and statutory and non-statutory nature reserves within 2 kms of the site was commissioned from Cambridgeshire & Peterborough Environmental Records Centre for the assessment undertaken in 2018. An update data search was not undertaken for this assessment as it was not considered that it would contribute to the recommendations made.

2.2 A search of the MAGIC (magic.defra.gov.uk) website was carried out to determine if any statutory designated nature conservation sites were located within 2 km of the site.

2.3 The ordnance survey 1:25000 scale map for the area was also examined for evidence of water bodies within dispersal distance of the site which might be potential great crested newt breeding sites.

3. Relevant Legislation and Planning Policies

Badgers

3.1 Badgers and their setts are protected under the Protection of Badgers Act 1992. All the following are criminal offences: to wilfully kill, injure, take, possess or cruelly ill-treat a badger, or to attempt to do so; to intentionally or recklessly interfere with a sett. Sett interference includes disturbing badgers whilst they are occupying a sett, as well as damaging or destroying a sett or obstructing access to it. A badger sett is defined in the legislation as 'any structure or place which displays signs indicating current use by a badger'. Badger setts can be disturbed by a multitude of operations which include excavation and coring. (English Nature, 2002).

Bats

3.2 All species of British bat are listed in Appendix II of the Berne Convention and various annexes of the Habitats Directive. They are protected under Schedule 5 of the Wildlife and Countryside Act 1981 and Schedule 2 of the Conservation (Natural Habitats, etc) Regulation 2017 (Regulation 43). It is therefore illegal to kill, injure or handle any bat or obstruct access to, destroy or disturb any site that they use. A £5000 fine and/or 6 months imprisonment per offence is the maximum penalty. Where a bat roost will be affected by development a licence to carry out the work will be required (issued by Natural England). This will be granted only if suitable mitigation for any adverse impacts on bats is to be carried out.

Birds

3.3 Under the Wildlife and Countryside Act (1981) it is a criminal offence to disturb nesting birds. The breeding season for most species is generally considered to extend between 1st March and 31st August inclusive, although some species may breed slightly earlier in the year or later. Site operations should be phased where possible to occur outside the breeding season. Within this period, clearance of structures and vegetation can only take place if either:

1) Affected areas are first checked by an ecologist or other suitably qualified person and no nesting is found to be occurring.
2) All parts of the vegetation or structures are clearly visible and no sign of nesting can be seen. If nests are found, work will have to be delayed in that area until chicks have left any nests.

For birds listed on Schedule 1 of the Wildlife and Countryside Act the protection is increased and it is also an offence to disturb them whilst in the process of nest building or at a nest containing eggs or young. It is an offence also to disturb dependent young. Bird species included in Schedule 1 include kingfishers, black redstarts, barn owls and red kites among others.

Great crested newts

3.4 Great crested newts are protected under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended). It is also a European Protected Species and has additional protection under Regulation 43 of the Conservation of Habitats and Species Regulations 2017. It is an offence to intentionally kill, injure or take a great crested newt, possess or control any live or dead specimen or anything derived from a great crested newt, intentionally or recklessly damage, destroy or obstruct access to any structure or place used for shelter or protection by a great crested newt (in practice this means breeding sites and terrestrial habitat). It is an offence to intentionally or recklessly disturb a great crested newt while it is occupying a structure or place which it uses for shelter or protection. A £5000 fine or six months custodial sentence per offence applies.

Reptiles

3.7 All native reptiles are protected under the Wildlife and Countryside Act 1981 (as amended). They are protected against killing or injuring even during lawful development. A £5000 fine or six months custodial sentence per offence applies.

National Planning Policy

3.8 National Planning Guidance for Local Authorities is contained within the National Planning Policy Framework 2019 (NPPF). The most relevant guidance relating to planning applications is found within section 19 (Conserving and enhancing the natural environment). This is shown below:

When determining planning applications, local planning authorities should apply the following principles:

a) if significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused;

b) development on land within or outside a Site of Special Scientific Interest, and which is likely to have an adverse effect on it (either individually or in combination with other developments), should not normally be permitted. The only exception is where the benefits of the development in the location proposed clearly outweigh both its likely impact on the features of the site that make it of special scientific interest, and any broader impacts on the national network of Sites of Special Scientific Interest;

c) development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons and a suitable compensation strategy exists; and

d) development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to incorporate biodiversity improvements in and around developments should be encouraged, especially where this can secure measurable net gains for biodiversity.

Local Planning Policy

3.9 Relevant local planning policies are detailed within the Huntingdonshire's Local Plan to 2036 (Adopted 15 May 2019). Relevant policies comprise;

- LP 30 Biodiversity and Geodiversity; and
- LP31 Trees, Woodland, Hedges and Hedgerows

4. Methodology of surveys

Preliminary Ecological Appraisal

4.1 The Preliminary Ecological Assessment was undertaken following standard methods as described in the Guidelines for Preliminary Ecological Appraisal (CIEEM, 2017) and the Phase 1 Habitat Survey Methodology (JNCC, 2016). A map showing habitat types and locations on site is included as Annex 2.

4.2 The Preliminary Ecological Assessment determines the potential for presence of protected and otherwise important or notable species on sites. Where it shows no evidence of a protected species and no suitable habitats for them, then further surveying for that species can be ruled out. Where suitable habitat is present further surveying is recommended if current guidelines and the judgement of the surveyor suggest presence is reasonably likely.

4.3 The following protected species are those most commonly found on potential development sites;

1. Bats
2. Birds
3. Great crested newts
4. Reptiles
5. Terrestrial mammals – [redacted], dormice, water voles

Table 1: Terms used in report to indicate likelihood of species presence

Confirmed	**Species directly observed on site Clear evidence of species presence observed (e.g. droppings, burrows, etc.)**
High	Important structures or features of use for breeding or refuge present. For instance, ponds for newts, old trees for bats. Significant amount of high-quality foraging habitat present Site adjacent to surrounding areas of suitable habitat, or connected by linear features of use to commuting species (e.g. river) Site close to known offsite species populations
Medium	Some features suitable for breeding or refuge present. Some suitable foraging habitat available Site connected to suitable offsite areas of habitat
Low	Small amounts of low-quality areas for refuge or breeding Small areas suitable for foraging Site not connected to suitable offsite habitats or species not likely to enter site.
Negligible	No suitable habitats on site

4.4 The likelihood of species being present ranges in a continuum from extremely unlikely to highly likely. The judgement of the surveyor combined with knowledge of habitats present, signs and sightings of animals and evidence from records is used to give an estimated likelihood of presence.

Bat Scoping Assessment

4.5 The survey was undertaken in accordance with the Bat Conservation Trust's Bat Surveys for Professional Ecologists: Good Practice Guidelines (Collins, 2016). The building was inspected externally from all angles using binoculars and then internally using a high-powered torch to inspect loft spaces (where present). Trees were inspected from ground level, using binoculars where needed and a high-powered torch to inspect potential bat roost features. Where possible, a ladder was used to inspect features within 3 m of ground level. All aspects of each tree were viewed, and wherever visibility was restricted (e.g. due to ivy or foliage), this is stated in the report.

4.6 Evidence searched for included bat droppings, feeding remains, staining from urine or grease marks and potential access points into roosting cavities. Features indicating potential for bat roosts included missing roof tiles, weatherboarding and/or hanging tiles with gaps, poorly maintained roof structures, holes in tree trunks, cracks in major limbs, loose bark and dense ivy growth.

GCN HSI Assessment

4.7 The great crested newt habitat suitability index (HSI) assessment was undertaken based on methodologies detailed in Oldham *et al.*, 2000. The HSI is a quantitative measure of the suitability of a pond to establish the likelihood of GCN being present. The assessment is based on ten factors including pond area, shade, terrestrial habitat, and water quality. The resulting index for each pond is expressed as a figure between 0 and 1, with scores below 0.5 indicating poor suitability for GCN and above 0.8 indicating excellent suitability.

5. Survey Results

Desk study results (2018)

5.1 The search found records of relevant protected species within 2 km of the site. These were:

- [redacted]
- Bats – Brown long-eared bat (*Plecotus auritus*), common pipistrelle (*Pipistrellus pipistrellus*), pipistrelle bat species (*Pipistrellus sp.*), natterer's bat (*Myotis nattereri*).
- Great crested newts (*Triturus cristatus*)
- Water vole (*Arvicola amphibious*)

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5.2 The data search showed 3 likely potential great crested newt breeding ponds within 250m of the site that were not separated from the site by major barriers to dispersal. Major barriers might include busy roads, walls, large areas of arable land, dense housing or similar.

5.3 The data search returned no records of statutory or non-statutory protected sites located within 2 km of the site boundary.

Local area and surrounding habitats

5.4 The central grid reference for the site is TL155861. The site is located within a rural village of Glatton with arable and pastoral land immediately north and east, residential housing west and woodland immediately south. The wider landscape is dominated by agricultural fields delineated by hedgerows with occasional woodland copses.

Weather conditions during site visit

5.5 Weather conditions are shown below:

- Precipitation: 0
- Temperature: 13 ^{o}C
- Cloud cover: 85 %
- Wind: 2 (beaufort scale)

Habitats found on site

5.6 The proposed development area was found to contain the habitats described below. Annex 2 to this report is a map showing locations of these habitats. Scientific names for plants listed below are given in Annex 1.

Table 2: Habitats found on site

Habitat type	Description
Buildings	Two buildings were identified on site; Glatton hall (Building B1) and a large shed/summer house (Building B2) located to the east of Glatton Hall. Building B1 is a large part brick, part concrete structure with a slate tiled multi-pitched and flat roof. The building is currently undergoing internal refurbishments and was in a moderate structural condition. The building had 5 loft spaces (See Annex 3, Loft Section Plan). Lofts 1 – 4 were all located within the front horizontal section of Glatton Hall. These lofts were supported by traditional purlin and rafter and modern trussed wooden beams and were all lined with bitumen felt and insulated with fibreglass. Lofts 1 - 4 were all heavily cobwebbed. Loft 5 is within the vertical section of Glatton Hall and has a modern trussed roof structure lined with felt and insulated with fibreglass and rockwool. A pile of c.100 bat droppings was recorded within the western section of loft space 2, see TN3 for location of droppings, Phase 1 Habitat Plan, Annex 2. **Photo 1 showing south facing aspect of Building B1:**  **Photo 2 showing loft space 1 within building B1:**  **Photo 3 showing loft space 2 within building B1**



Photo 4 showing bat droppings recorded within loft space 2 within building B1:



Photo 5 showing loft space 3 within building B1



Building B2 is a single storey wooden shed with a slate tiled roof and no loft space.

Photo 6 showing building B2



Dense scrub	An area of dense bramble scrub habitat was recorded east and west of building B2. This habitat appeared unmanaged and overgrown. **Photograph 7 dense scrub habitat on site.** 
Scattered Scrub	A small area of scattered bramble scrub was recorded with tall ruderal habitat, east of pond P1 located within the northern boundary of the site. This habitat appeared to be unmanaged and overgrown. **Photo 8 showing scattered scrub on site within the site's north boundary** 
Hardstanding	Hard-standing forms the parking area and access to Glatton Hall (See photograph 1). Hardstanding is also located to the rear and west of Glatton Hall where it was previously used as a patio and to the west as parking area. **Photo 9 showing hard-standing habitat to the rear of Glatton Hall** 

	Photo 10 showing hard-standing habitat to the west of Glatton Hall 
Introduced shrubs	Small ornamental planted areas were located within the front gardens of Building B1 and along the site's western boundary wall. These areas appeared to be unmanaged and overgrown. Introduced shrub species included euonymus species, hele species, rose species, red robin and lonicera species. **Photo 11 showing introduced shrubs located along the site's western boundary wall** 
Mixed parkland scattered trees	Mixed parkland scattered trees were recorded along the site's eastern boundary within the semi-improved neutral grassland habitat. Tree species comprised ash, oak and yew.

Semi-natural Mixed Woodland	A large area of semi-natural mixed woodland was located within the southern section and along the eastern boundary of the site. Brash and log piles were located within the woodland habitats, see Annex 2 TN1. The woodlands have a sparse understorey of laurel shrub, common nettle and elder. Tree species included ash, yew, laurel, Leyland cypress, pine species, false acacia and holm oak. **Photo 12 showing semi-natural mixed woodland and semi-improved neutral grassland habitat within the southern section of the site:**  **Photograph 13 showing ground flora within woodland habitat, south of building B1**  **Photograph 14 showing semi-natural mixed woodland along the eastern boundary of the site** 

	Photograph 15 showing log and brash pile within woodland habitat south of building B1 
Semi-improved neutral grassland	A large area of tall (0.5 – 1 m in height) semi-improved neutral grassland was located south and east of Glatton hall (Building B1). This habitat was also recorded north of Building B1 in the former garden area. This habitat contained mixed scattered parkland trees along the eastern border of the site. The grassland (formerly recorded as amenity grassland within the 2018 Phase 1 Habitat survey assessment) appeared to be unmanaged and overgrown. Grass species included; meadow barley, false oat-grass, cock's foot, perennial rye grass, Yorkshire fog, rough meadow-grass, smooth meadow-grass, red fescue, meadow foxtail, tufted hair grass, bird's foot trefoil, ladies bedstraw, broad-leaved dock, ground-ivy, cow parsley, spear thistle, ribwort plantain and dove's-foot crane's-bill. Tree species comprised, yew, oak, hazel, ash and elder. **Photo 16 - showing semi-improved neutral grassland south of Building B1**  **Photo 17 – showing semi-improved neutral grassland (red arrow) and tall ruderal habitat (yellow arrow) north of building B2** 

Standing Water/Ponds	A dry ornamental pond was recorded at the rear of building B1. This pond was constructed of brick and lined with black plastic sheeting and contained limited aquatic plants. **Photo 18 showing dry pond located to the rear of building B1:** 
Tall ruderal vegetation	A small area of tall ruderal vegetation was recorded along the northern boundary of the site. Plant species comprised rosebay willowherb, broad-leaved dock, creeping thistle, spear thistle, common mallow, yarrow, and great mullein. See photograph 17 for this habitat.

Table 3: Likelihood of protected species on site

Protected species	Potential for presence	Suitability of habitats on site.	Evidence of presence on site or data suggesting likely presence
[redacted]			
Bats – Buildings and Trees	**Confirmed - High**	Building B1 had the following potential bat roosting features; lifted lead flashing (TN2, Phase 1 Habitat plan, Annex 2), missing mortar within chimney walls and loft spaces. Several trees were found on site to contain suitable features for bats to roost in. This is described in detail in the recommendations section below.	The data search found records of 3 different species of roosting bats within 2 km of the site. Potential bat roosting features were inspected using a high-powered torch and endoscope. No bats and/or signs of bats were recorded using these features. C.100 bat droppings (likely brown long-eared bat) were recorded within loft space 2, within building B1. No actual bats were recorded. Light was seen penetrating through the eaves of this loft space providing a potential access point (for location see TN4, Phase 1 habitat Plan, Annex 2). Due to the complex structure of the roof, this potential bat entry point was not possible to see from the ground. Bat emergence/re-entry surveys were undertaken on trees T12, T20 and T66 (due to be removed), in May and June 2018. No bats were seen emerging or re-entering the trees.
Breeding birds	**High**	The site contained woodland, scattered trees, grassland, dense scrub, introduced shrubs, tall grassland, and buildings suitable for birds to nest in. It seems likely they might nest on site in the breeding season.	The data search returned records of 27 different bird species within 2 km of the site. Species that could be using habitats within the site include dunnock, yellowhammer, yellow wagtail and tree sparrow.
Great crested newts	**Medium**	A single pond (Pond P1) was identified on site. This pond was deemed to have Negligible potential for breeding great crested newt due to the height of the pond, walls preventing access into the pond and its current dry status. The woodland habitat, tall ruderal vegetation, tall grassland and dense scrub within the site provide suitable terrestrial habitat for newts. Three waterbodies were identified	The data search found a single record of great crested newts within 2 km of the site. A Habitat Suitability Index (H.S.I) assessment was undertaken on Pond P2. This pond was assessed as having “Poor” potential to support great crested newts. Access was not possible to ponds P3 and P4.

Protected species	Potential for presence	Suitability of habitats on site.	Evidence of presence on site or data suggesting likely presence
		within dispersal distance of the site boundary. A single waterbody was identified 48 m east of the site boundary (Pond P2). A further additional waterbody was identified 61 m north-west (Pond P3) and 182 m south-east (Pond 4). Pond locations can be seen on the Phase 1 Habitat plan for the site, Annex 2.	
Reptiles	**Medium**	Tall grassland habitat, woodland, tall ruderal, brash and log piles and dense scrub bases all provide suitable refuge, foraging, hibernation and basking habitat for common reptile species. The site is connected to suitable habitats within the wider landscape including woodland, residential back gardens and farmland (field boundaries, hedgerow bases).	The data search found no records of reptiles within 2 km of the site.
Other protected species	**Negligible**	No habitats suitable for water voles, otters, or other protected species not mentioned above.	

Invasive species

5.7 No evidence of Japanese knotweed (*Fallopia japonica*), giant hogweed (*Heracleum mantegazzianum*) or other important invasive species was seen on site.

6. Discussion of results and recommendations

Constraints to surveying

6.1 All works areas were visible and accessible. Therefore, there were no constraints to surveying.

Protected sites

6.2 No statutory and/or statutory sites were identified within 2 km of the site boundary.

[redacted]

Bats - Buildings

6.4 Inspection of potential bat roosting features within building B1 identified c.100 bat droppings within the western end of loft space 2. Potential access into this loft space was recorded at the northern eave of the roof section. Even though no actual bats were recorded the building is still considered to be a confirmed roost due to the presence of bat droppings. The loft spaces within the building will not be directly impacted by the proposed site works and internal refurbishments of below floors are only required. If plans change and loft 2 is due to be directly impacted then further nocturnal bat surveys (emergence, re-entry surveys) will be required to distinguish the

current status of the roost. A European protected species licence, obtained from Natural England, may also be required for works to proceed lawfully.

6.5 Building B2 has negligible potential for roosting bats due to the absence of access points leading into potential roosting features.

Bats - Trees

6.6 The below 14 trees were identified as having low – high potential for roosting bats (See BHA Trees Limited survey report, Glatton Hall 2018, for tree locations);

- T12 Ash – 4 x woodpecker holes facing west at approximately 5 m – 12 m, 1 x woodpecker hole facing east at approximately 5 m and 1 x woodpecker hole at 5 m facing south, **high potential;**
- T19 6 Ash – 2 x rot holes at approximately 3 m facing north, lifted and damaged bark throughout, **moderate potential**;
- T20 Oak – 3 x woodpecker holes facing west at approximately 5 m – 20 m, **high potential;**
- T21 Ash – 1 x rot hole facing south at approximately 6 m, **moderate potential**;
- T22 Ash – 1 x rot hole at approximately 2 m facing west, **moderate potential**;
- T23 Ash – 1 x woodpecker hole facing south at approximately 10 m, **moderate potential;**
- T30 Copper beech – knot hole c. 7m facing west, woodpecker hole c.21 m facing south, knot hole c.21 m facing west, knot hole c. 7.5 m facing north, woodpecker hole c.13 m facing west – **high potential**;
- T41 Ash – branch drop has created potential cavity at c. 10 m facing west, low potential.
- T43 Holm oak – Woodpecker hole at 8 m facing south, large cavity c. 2 m facing east, potential cavity at c.5 m facing east, **moderate potential.**
- T53 Oak – 3 x woodpecker holes at approximately 12 m facing east, high potential; and
- T63 Ash – 5 x woodpecker holes and 2 x rot holes at approximately 15 m – 20 m south, 2 x woodpecker holes at 16 m facing north, **high potential.**
- T66 Ash –2 x woodpecker hole facing east at approximately 2 m and south at c. 8m - moderate potential;
- T69 Ash - woodpecker hole c.12 m facing west, cavity c 10 m facing west, **moderate potential**
- T70/71 Ash – 2 x woodpecker hole c. 8 m facing east, cavity at c.7m facing east, **moderate potential**

Photo 19– T12



Photo 20 – T19



Photo 21 – T20



Photo 22 – T21



Photo 23 – T22



Photo 24 – T23

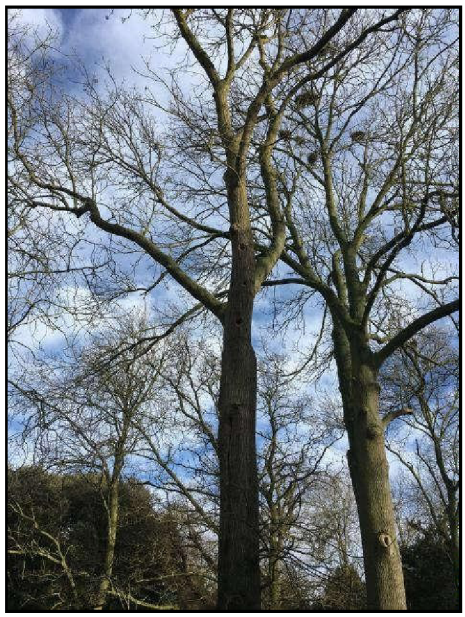

Photo 25 – T30



Photo 26 – T30



Photo 27 – T41



Photo 28– T43



Photo 29 – T43



Photo 30 – T53



Photo 31 – T63

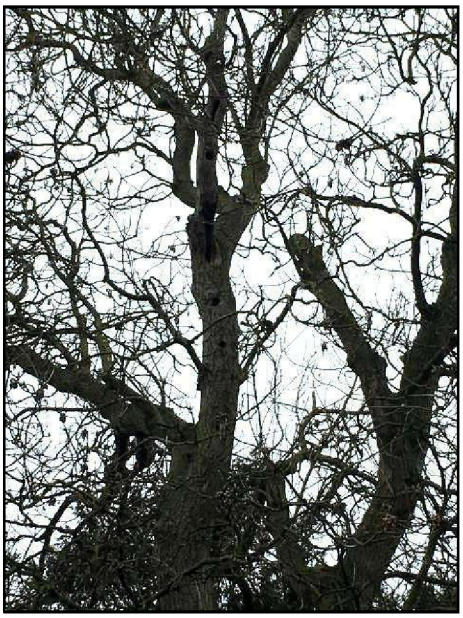

Photo 32– T66



Photo 33 – T66



Photo 33– T69



Photo 19 – T53



Photo 20 – T63

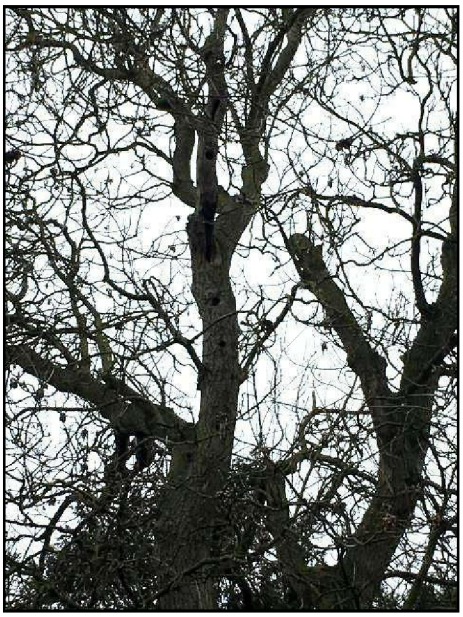

Photo 34 – T70/71



6.7 It was recommended that trees T12, T20 and T66, due to be removed, were subject to further elevated inspection and/or emergence/return surveys, to confirm whether they are used by roosting bats. Bat emergence/re-entry surveys undertaken in May and June 2018 on the aforementioned trees recorded no bats emerging or re-entering the trees. These trees have not been felled thus update bat emergence/re-entry surveys or elevated inspections of these trees should be undertaken if removal is required.

6.8 Additional trees identified, due to be removed, with potential bat roosting features, should also be subject to further elevated inspections and/or emergence/re-entry surveys, to confirm whether they are used by roosting bats.

6.9 Elevated inspections aim to investigate potential bat roost features closely, using an endoscope to search for evidence of bats and investigate the extent of potential bat roost features. Elevated inspections must usually be undertaken by qualified tree climbers licensed to use endoscopes to investigate potential bat roosts. In some cases, elevated inspection will show that a potential roost feature actually does not extend into a cavity and therefore is not of roosting potential. In such cases the tree may be removed without further constraints. Elevated inspection can be undertaken throughout the year and in some cases can rule out the need for further survey. Where elevated inspection shows that cavities are extensive, or finds evidence of roosting bats, emergence/return surveys may still be required.

6.10 Emergence/return surveys are recommended where features exist that may be used by roosting bats, particularly if an elevated inspection is impractical. Each tree should be surveyed on two occasions for trees with moderate potential for roosting bats and two occasions for trees with high potential for roosting bats, to include at least one dawn and one dusk survey. The surveys may be undertaken between May and September, inclusive. The number of surveyors required will depend on the number of trees requiring removal.

6.11 If bats are found to be roosting within trees, any works likely to disturb bats or bat roosts may only be undertaken once a Natural England Mitigation Licence has been obtained.

Bats – Foraging and Commuting Habitat

6.12 The location of the site and the surrounding area is considered to be of moderate value for commuting and foraging bats. The wider landscape contains a variety of habitats including woodland, waterbodies, arable fields and hedgerows. It is expected that a variety of bat species may be found in the local area. It is likely that foraging or commuting bats use the site itself to a certain extent.

6.13 In order to avoid a detrimental impact on bats using woodland habitats on and surrounding the site, it is recommended that there should be no significant increased light spillage onto the eastern and southern boundaries of the site where bats are most likely to forage and commute.

6.14 The following measures, detailed within the Bat Conservation Trust (BCT) & Institution of Lighting Professionals (ILP), (2018). *Bats and artificial lighting in the UK. Bats and the Built Environment series*. Guidance Note 08/18., should be integrated into a sensitive lighting scheme for the site:

- Minimise light spill through careful aiming, positioning and selection of luminaires;
- Use of LED luminaires which have good cut-off times (i.e. 1 minute), low intensity (minimum required for safety and security) and have dimming options;
- 0% upward light output with no tilt;
- Selecting warm white luminaires with peak of >550nm and no UV component;
- Consideration of light column heights to reduce spill and the use of specialist bollards; and
- Where security lamps are used these should use a sensor to illuminate them (e.g. PIR infra-red detector), and switch off after a short period, rather than remaining on all night.

Breeding Birds

6.15 The survey found a high probability of birds nesting on site during the nesting season (1st March to 31st July). Should any clearance of scrub, shrubs, trees, tall grassland or be required this should be carried out outside the nesting season. If clearance is required during the nesting season any such areas to be cleared should first be inspected by an ecologist, unless it is obvious that no birds are nesting. If an active nest is then found clearance will have to be delayed within 5 metres of the nest until any chicks present have left the nest.

Great crested newts

6.16 The data search found a single record of great crested newts within 2 km of the site. A single pond (Pond P1) was identified on site. This pond was deemed to have Negligible potential for breeding newts due to the height of the pond walls preventing access into the pond.

6.17 The woodland habitat which contains brash and log piles within the southern and eastern section of the site provides moderate potential for great crested newts within their terrestrial phase. The tall semi-improved neutral grassland habitat, scrub bases and tall ruderal habitat moderate potential for great crested newts within their terrestrial phase.

6.18 Three waterbodies were identified within dispersal distance of the site boundary recorded at 48 m east (Pond P2), 61 m north-west (Pond P3) and 182 m south-east (Pond P4).

6.19 A Habitat Suitability Index (H.S.I) assessment was undertaken on Pond P2. This pond was assessed as having "Poor" potential to support great crested newts. Access was not possible to ponds P3 and P4.

Table 4: Great Crested Newt Habitat Suitability Index (H.S.I)

Index	Pond 2
Field location	Optimal
Pond area (m2)	202
Pond drying*	Dries annually
Water Quality*	Moderate
Shade (% of bank)	90%
Fowl	Absent
Fish*	Possible
Ponds in 1 km	2
Terrestrial Habitat	Moderate
Macrophytes	20%
Grid reference	TL156862
Distance from site (m)	48 east
HSI Score	0.43
Pond Suitability	Poor

Photograph showing pond P2.



6.20 Habitats on site, suitable for great crested newts within their terrestrial phase will not be removed as part of the site proposals. Grassland habitats will be managed through cutting to maintain floral diversity and a limited number of trees will be felled. Tall ruderal and scrub habitats may also be managed through cutting. These habitats are not suitable for hibernating great crested newts due to the absence of cracks and crevices, providing protection against winter conditions.

6.21 It is recommended that the aforementioned habitats are cut between March and June when, if present GCN are more likely to be in their aquatic phase. Alternatively, it is recommended that suitable habitats are cut during the winter months between November and March when great crested newts are likely to be using underground refuge features (mammal burrows, root systems, log piles). If cutting of suitable habitats is required between June – November then a two-stage cut is recommended whereby habitats are strimmed, carefully, using hand tools to 30 cm, left overnight then cut to ground level the following day, this allows any great crested newts, if present, to disperse into surrounding suitable habitats overnight.

6.22 If significant disturbance to the woodland habitat on site is required, including tracking of large vehicles and destruction of hibernacula, it is recommended that access is obtained to pond P3 and P4 to undertake a Habitat Suitability Index survey to assess the pond's suitability for great crested newts.

6.23 If pond P3 and/or P4 is found suitable to support great crested newts a further great crested newt environmental DNA (eDNA) survey will be required. Use of this method confirms whether newt populations are present or absent, and therefore may avoid the need for unnecessary precautions, or unexpected discoveries of newts during the construction process. eDNA samples can only be taken between mid-April and June.

6.24 If GCN are found present and a significant amount of disturbance to the woodland is proposed a precautionary Working Method Statement will be required to avoid disturbance and/or killing and injury to GCN.

Reptiles

6.25 The site contains large areas of suitable habitat for common reptile species including; tall grassland, tall ruderal and dense scrub providing foraging, refuge and basking opportunities. With woodland (root systems, brash and log piles, potential mammal burrows) habitats proving refuge and hibernation habitat.

6.26 The site is connected to suitable habitats within the wider landscape including woodland, residential back gardens and farmland (field boundaries, hedgerow bases).

6.27 It is often recommended that a Reptile Survey be undertaken to determine the presence or likely absence of reptile species. In this instance, however, due to the retention of

suitable habitats and low intensity management proposed it is recommended that precautionary working measures are applied.

6.28 It is recommended that suitable habitats are cut during the reptile hibernation period (October – March).

6.29 If cutting is required when reptiles are active (April – November) then habitats should be strimmed carefully, using hand tools, in two passes, following methodologies subscribed within the aforementioned great crested newt section.

6.30 Log/ brash piles should be dismantled by hand and if possible re-located in a similar habitat outside of the working footprint. This approach can only be undertaken between April and November (when temperatures are not below 10°C) when reptiles are active.

Other protected and/or notable species

6.31 The site lacks habitats able to support other protected and/or notable species.

Invasive species

6.32 No important invasive species were found on site. As no important invasive species were found no precautions are required relating to these, however workers should inform the relevant manager should Japanese knotweed or similar be found. Further advice should then be sought from an ecologist.

7. References

UK Biodiversity Action Plan (www.jncc.defra.gov.uk)
BHA Trees Ltd (2018) Tree Survey at Glatton Hall
English Nature (2001) Great Crested Newt Mitigation Guidelines, English Nature, Peterborough
Collins, J. (ed.) (2016) Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd edn). The bat Conservation Trust, London
CIEEM (2017). Guidelines on Ecological Report Writing. Chartered Institute of Ecology and
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Froglife, (1999). Reptile survey: an introduction to planning, conducting and interpreting surveys for snake and lizard conservation. Froglife Advice Sheet 10. Froglife, Halesworth.
Huntingdonshire's Local Plan to 2036 (2019) Huntingdonshire District Council
Joint Nature Conservation Committee (2016). Handbook for Phase 1 habitat survey a technique for environmental audit.
MAGIC (www.defra.gov.uk)

Document Production and Approval

Status	Personnel	Date
Draft	Emma Reid	11/06/2020
Reviewed	Dan Sullivan	13/06/2020

8. Annexes

Annex 1: List of plant species mentioned in report showing scientific names
Annex 2: Phase 1 Habitat Map showing habitats on site on the 8th June 2020.
Annex 3: Loft Location Plan

Annex 1: List of plant species mentioned in report showing scientific names

Ash	*Fraxinus excelsior*
Beech	*Fagus sylvatca*
Bramble	*Rubus fruticosus*
Buddleia	*Buddleja davidii*
Bird's - foot trefoil	*Lotus corniculatus*
Broad-leaved dock	*Rumex obtusifolius*
Cherry	*Prunus sp.*
Cherry Laurel	*Prunus laurocerasus*
Cock's-foot	*Dactylis glomerata*
Creeping Thistle	*Cirsium arvense*
Creeping cinquefoil	*Potentilla reptans*
Cow parsley	*Anthriscus sylvestris*
Common mallow	*Malva sylvestris*
Tree cotoneaster	*Cotoneaster frigidus*
Elder	*Sambucus nigra*
Euonymus species	*Euonymus sp.*
Eucalyptus	*Eucalyptus sp.*
False Oat-grass	*Arrhenatherum elatius*
False-acacia	*Robinia pseudoacacia*
Ground ivy	*Glechoma hederacea*
Hazel	*Corylus avellana*
Hawthorn	*Crataegus monogyna*
Hebe species	*Hebe sp.*
Holly	*Illex aquifolium*
Holm oak	*Quercus ilex*
Hornbean	*Carpinus betulus*
Lady's bedstraw	*Galium verum*
Lawson cypress	*Chamaecyparis lawsoniana*
Lonicera species	*Lonicera sp.*
Meadow barley	*Hordeum brachyantherum*
Meadow foxtail	*Alopecurus pratensis*
Great mullein	*Verbascum thapsus*
Nettle	*Urtica dioica*
English Oak	*Quercus robur*
Perennial Rye-grass	*Lolium perenne*
Pear	*Pyrus communis*
Pine	*Pinus sp.*
Plum (*Prunus domestica*)	
Rose	*Rosa* sp.
Red robin	*Photinia × fraseri*
Red fescue	*Festuca rubra*
Ribwort plantain	*Plantago lanceolata*

Rough meadow -grass	*Poa trivialis*
Rosebay willowherb	*Chamaenerion angustifolium*
Smooth meadow -grass	*Poa pratensis*
Spear thistle	*Cirsium vulgare*
Teasel	*Dipsacus fullonum*
Tufted hairgrass	*Deschampsia cespitosa*
Turkey Oak	*Quercus cerris*
Yew	*Taxus baccata*
Yorkshire-fog	*Holcus Lanatus*

Annex 2: Phase 1 Habitat Map showing habitats on site on the 8th June 2020



N

Legend

- Building
- Introduced Shrubs
- Hard standing
- Standing Water/ Pond
- Dense Scrub
- Scattered Scrub
- Target Note
- Tall Ruderal
- SI — Semi-improved Neural Grassland
- Mixed Parkland Scattered trees
- Mixed Semi-Natural Woodland

Project Name
Glatton Hall

Drawing Title
Phase 1 Habitat Plan

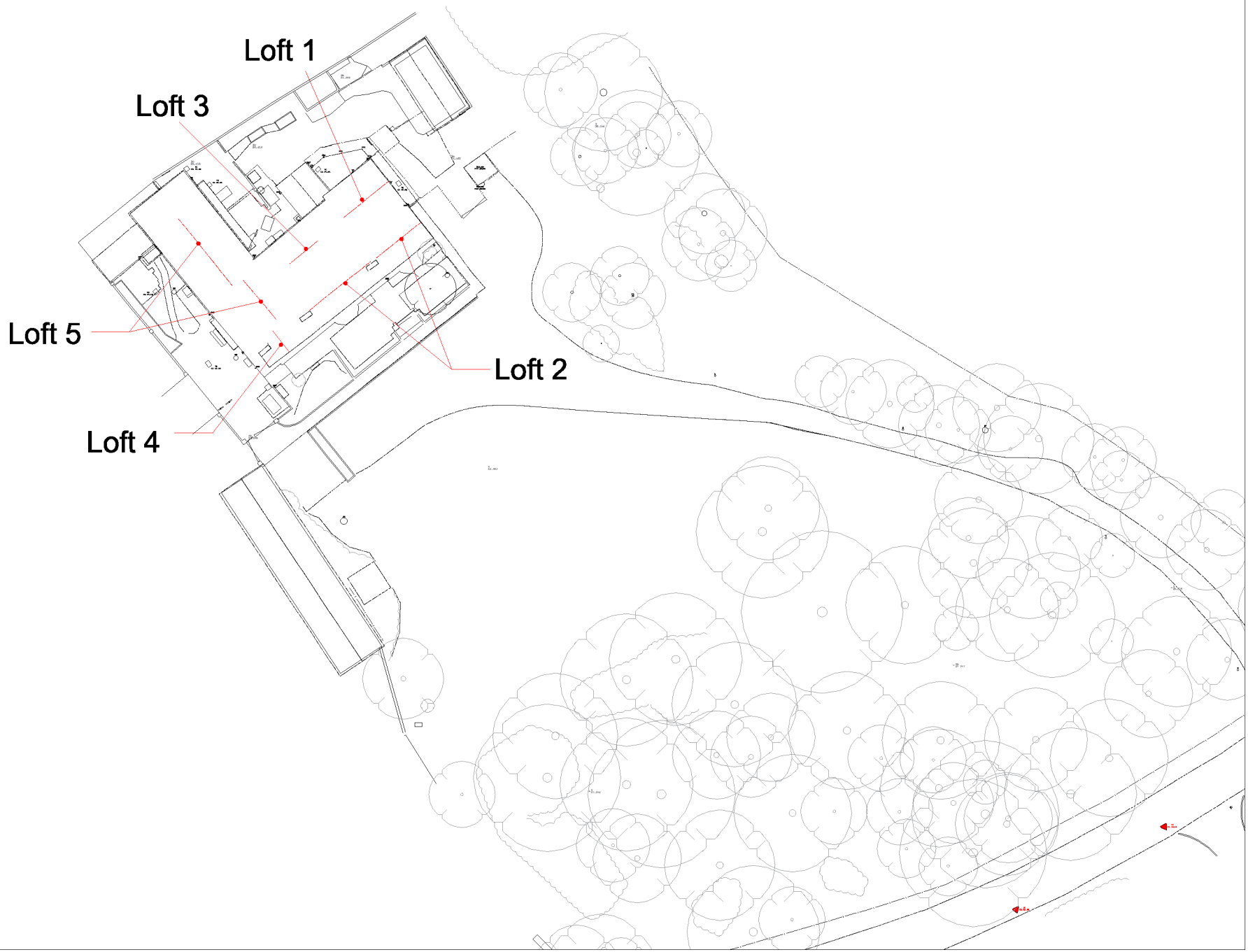
Client
Fortress Capital Advisors Ltd

Date Drawn
10/06/2020

Drawn By
G.H.R

Scale
1:500@A1

Annex 3: Loft Location Plan



Project Name
Glatton Hall

Drawing Title
Loft Section Plan

Client
Lawrence Barker Limited

Date Drawn
25.01.2018

Drawn By
H.R

Scale
1:200 A1

DO NOT SCALE Use only figured dimensions