



Extended Phase 1 Habitat Survey
Land off Spalding Road, Pinchbeck
For AJ and RJ Cooke
Delta-Simons Project No. 16-0323.02
Issued: July 2016

EXECUTIVE SUMMARY

EXTENDED PHASE 1 HABITAT SURVEY

LAND OFF SPALDING ROAD, PINCHBECK

FOR AJ AND RJ COOKE

DELTA-SIMONS PROJECT No. 16-0323.02

Purpose	Delta-Simons Environmental Consultants Ltd was instructed by Robert Doughty Consultancy on behalf of AJ and RJ Cooke ('the Client') to undertake an Extended Phase 1 Habitat survey of an area of land situated off Spalding Road to the east of Pinchbeck in Lincolnshire ('the Site'). The survey was undertaken on 6 th July 2016. Habitats and the potential of the Site for protected species were assessed during the Extended Phase 1 Habitat Survey. The survey was undertaken in order to inform a planning application for the Site.
Current Site Status	The Site is characterised by unmanaged grassland fields with areas of ruderals, and boundary hedgerows, ditches and scattered trees.
Proposed Development	It is understood that the proposed development will comprise 16 residential properties with associated access roads and landscaping.
Results: Habitats on-Site	△ Dense Scrub; △ Scattered Broadleaved Trees; △ Marshy Grassland; △ Poor Semi-Improved Grassland; △ Tall Ruderals; △ Standing Water; △ Amenity Grassland; △ Intact Species-Poor Hedgerow; △ Defunct Species-Poor Hedgerow; △ Fence; △ Dry Ditch; and △ Hardstanding.
Habitats within Land Adjoining the Site	To the north of the Site is grassland, whilst to the east lie ditches supporting standing water, arable fields, further unmanaged grassland, and a residential property within extensive grounds. To the south is Blue Gowt Drain with residential properties beyond, and to the west is Spalding Road and properties within Pinchbeck village, a ditch supporting standing water and the local church, St Mary Church of England.
Recommendations	The detailed recommendations set out within the Report are summarised below: Recommendation 1 (Nesting Birds) If any clearance or management works are to be undertaken on the scattered trees, grassland and hedgerows featured on the Site, these should be performed either before early March or after late July in order to avoid the main bird nesting season. If, however, Site clearance works are deemed necessary during the nesting period an experienced ecologist will be required to check the Site habitats immediately prior to works commencing to confirm that no nesting birds will be affected by the proposed works.

	Recommendation 2 (Great Crested Newts, GCNs) In order to determine the current presence/ likely absence of GCN at the Site it is recommended that Habitat Suitability Index (HSI) calculations are completed of the three ponds and the ditch identified within 500 m of the Site, where access permits, and aquatic surveys undertaken of any pond that is assessed as having an 'Average or above' likelihood of supporting this species. If GCNs are present within habitats within 500m of the Site, it may be necessary to apply for a European Protected Species Licence (EPSL) from Natural England prior to commencing construction works. An application for the licence cannot be made until full planning permission has been granted. Recommendation 3 (Reptiles) It is recommended that a reptile survey is undertaken to establish the size of the population of reptiles present at the Site. This would involve a total of seven visits to the Site to check natural and artificial refugia for the presence of reptiles. The surveys can be undertaken from late March until October during suitable weather conditions. If reptiles are present, a mitigation program will be required to enable the proposed works to proceed without the potential for harm to these species. Recommendation 4 (Bats) Given the number of trees assessed as having low Bat Roosting Potential (BRP) and the lengths of the boundary features offering commuting and foraging opportunities, it is recommended that a transect survey is undertaken at the Site, in both summer and autumn, in order to determine the amount of bat activity at the Site, and any potential impacts resulting from the proposed development, such that appropriate mitigation can be put in place, if necessary. If trimming or felling works are required to any of the trees assessed as having low BRP it is recommended that a licensed bat ecologist checks the trunk for any signs of roosting bats/ bat activity prior to any works taking place. Nocturnal surveys may be required to inform a European Protected Species Licence (EPSL) application to undertake the works should a tree be found to be supporting roosting bats. The boundary hedgerows at the Site may provide suitable habitat for commuting and foraging bats, as well as suitable habitat and connectivity for other wildlife. It is recommended that, where possible, these hedgerows are retained and that a sensitive lighting plan is developed such that the proposed development does not increase lighting along these habitats. Recommendation 5 (Otter) Whilst no signs of this species were recorded at the time of the survey, as is general good practice for Sites where otters may occur, it is recommended that no excavations or trenches are left uncovered overnight during the development works in order to prevent any otters from becoming trapped. Alternatively, ramps can be provided to enable them to climb out of trenches or excavations. Recommendation 6 (Water Vole) If any works are required within 5 m of Blue Gowt Drain or the short length of the north-eastern ditch, a water vole survey should be undertaken of the watercourses in order to determine the presence/ likely absence of this species and to assess the impact of the proposed works. The survey will require up to two visits to determine the extent of water vole activity along the Drain and
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	ditch, one survey would ideally be undertaken between mid-April and June, and a second from July to September, with at least two months between surveys. Recommendation 7 (Pollution Prevention) Contractors should adhere to best practice procedures with regards to pollution prevention and working near watercourses. Recommendation 8 (Planning) Following the issue of the National Planning Policy Framework (NPPF, 2012) by the Department for Communities and Local Government (DCLG), "<i>The planning system should contribute to and enhance the natural and local environment by: Minimising impacts on biodiversity and providing net gains in biodiversity where possible, contributing to the Government's commitment to halt the overall decline in biodiversity...</i>"; and, therefore, for this particular development the use of native plant species sourced from local nurseries is recommended in landscape proposals to enhance foraging opportunities for local birds and bats, by increasing the invertebrate diversity on-Site. A species list of recommended trees and shrubs is included within the recommendations section of this Report.
This Extended Phase 1 Habitat Survey 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. This Executive Summary should be read in conjunction with the full Report.	

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**EXTENDED PHASE 1 HABITAT SURVEY
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1.0 INTRODUCTION

1.1 Purpose and Scope of the Survey

Delta-Simons Environmental Consultants Ltd was instructed by Robert Doughty Consultancy on behalf of AJ and RJ Cooke ('the Client') to undertake an Extended Phase 1 Habitat Survey. The survey was undertaken of an area of land off Spalding Road, to the east of Pinchbeck in Lincolnshire (hereafter referred to as the "Site"). In addition, public land immediately surrounding the Site was surveyed. The survey was undertaken in order to inform a planning application for the Site.

The aims of the Extended Phase 1 Habitat Survey were to:

- △ Identify habitat types on the Site using the standard methodology devised by the Joint Nature Conservation Committee (JNCC, 2010);
- △ Identify areas of potential for protected species/ species of conservation concern within the Site;
- △ Identify areas of potential for protected species/ species of conservation concern immediately outside the Site;
- △ Identify any invasive plant species included within Schedule 9 of the Wildlife and Countryside Act (WCA) 1981 (as amended);
- △ Prepare a Phase 1 Habitat Survey Plan of the Site; and
- △ Propose recommendations for further surveys, where necessary.

The Site location and the area surveyed are shown in Figure 1.

1.2 Site Description

The Site covers a main northern and southern area, which are separated by a private road and grassland. The northern area is centred at Ordnance Survey (OS) grid reference TF 24330 25596 and the southern section at TF 24385 25203, to the east of Pinchbeck. The Site covers an area of approximately 4.2 hectares and comprises unmanaged grassland fields with scattered trees and areas of ruderals, bordered by hedgerows and ditches.

The majority of the Site comprises unmanaged grassland with areas of ruderals and scrub around parts of the field edges. Scattered trees were present within the northern two grassland areas, either side of a central road and around the Site boundary, whilst hedgerows bounded much of the Site and divided the northern and southern fields. A small area of amenity grassland was present south of the central road and an area of marshy grassland lay adjacent to the northern boundary. Two short lengths of ditch divided the northern field and lead into further ditches off-Site.

To the north of the Site is grassland, whilst to the east lie ditches supporting standing water, arable fields and further unmanaged grassland and a residential property within extensive grounds. To the south is Blue Gowt Drain with residential properties beyond, and to the west is Spalding Road and properties within Pinchbeck village, a ditch supporting standing water and the local church, St Mary Church of England.

Topographically the Site is flat and at the time of the survey appeared well drained, however, in the north of the Site is a damp area supporting more wetland species and patches of standing water to a maximum depth of approximately 10 cm.

The Site layout is shown in Figure 2.

1.3 Proposed Development

It is understood from the drawing provided by the client that the Site will include 16 residential properties split across the two plots, nine in the southern half, and seven in the northern half (Figure 3). Furthermore, the hedgerows and trees are due to be retained with additional planting in the north and south of the northern field and along the southern boundary.

2.0 LEGISLATION

2.1 Birds

All wild birds are protected under Section 1 of the Wildlife and Countryside Act (WCA) 1981 (as amended). Subsection 1(1) makes it an offence to intentionally kill, injure, or take any wild bird; take, damage or destroy the nest of any such bird whilst it is in use or being built; or take or destroy an egg of any such wild bird. It is, furthermore, an offence to either intentionally, or recklessly, disturb any wild bird listed on Schedule 1 while it is nest building, or at a nest containing eggs or young, or disturb the dependent young of such a bird. The law covers all species of wild birds including common, pest or opportunistic species.

2.2 Amphibians

All amphibians are protected under the WCA 1981 (as amended), with some species also protected under the European Habitats Directive (92/43/EC), transposed in England and Wales through the Conservation of Habitats and Species Regulations 2010 (as amended). All amphibians are protected from keeping, transporting, selling or exchanging. This means that in practice reasonable measures must be taken to avoid their incidental mortality.

The Great Crested Newt (GCN) is protected under the Conservation of Habitats and Species Regulations 2010 and Schedule 5 / 9(4)(b) and (c) of the WCA 1981 (as amended). It is an offence to deliberately kill, injure, capture GCN or to deliberately disturb this species, or to intentionally or recklessly obstruct access to their places of shelter or protection, to damage or destroy their breeding sites or resting places, or to intentionally or recklessly disturb a GCN whilst in a place of shelter or protection. The legislation applies to all stages of the life cycle including eggs, larvae and juveniles. It should be noted that GCNs spend the majority of their lives on land, venturing up to 500 m (but more usually 250 m) from their breeding ponds and as such any ground works within 500 m of a breeding pond could potentially have an adverse effect on GCNs.

2.3 Reptiles

All six native species of reptiles are protected under the 1981 WCA (as amended), from intentional killing or injury. As such, all reasonable steps must be taken to avoid their incidental mortality when carrying out works.

2.4 Bats

All bats are protected under Section 9(4)(b) and (c) of the WCA 1981 (as amended) and by the Conservation of Habitats and Species Regulations 2010 (as amended).

It is an offence to destroy or damage a breeding site or resting place of a bat, to intentionally or recklessly obstruct access to any place of shelter or protection for bats, to deliberately disturb bat species, to intentionally or recklessly disturb a bat whilst it is its place of shelter or protection, or deliberately capture, injure or kill a bat. It should be noted that a breeding site or resting place of a bat is protected whether or not bats are present, as long as it is likely that they will return, and any activity or works damaging or destroying such a breeding site or resting place are likely to require a Natural England European Protected Species Licence (EPSL).

2.5 Badgers

Badgers *Meles meles* and their setts are protected under the 1992 Protection of Badgers Act. Under this Act it is an offence to wilfully kill, injure, take, possess or cruelly ill-treat badgers, or to attempt to do so. It is also an offence to intentionally or recklessly damage, destroy, or obstruct access to any part of a sett, or to disturb an occupied sett, either by intent or negligence. When interpreting the Act, Natural England defines a sett as any structure within an area used by badgers that shows signs of having been occupied by badgers within the last 12 months.

2.6 Otters

Otter *Lutra lutra* is afforded strict protection under Section 9 of the WCA 1981 (as amended) on Schedule 5 of the WCA 1981 (as amended) and Annex IV of the Conservation of Habitats and Species Regulations (2010). They also receive protection through their inclusion in Schedule 5 of the WCA 1981 (as amended).

Under the legislation, it is an offence to intentionally capture; injure or kill an otter; intentionally or recklessly damage or destroy a breeding site or resting place of an otter; intentionally or recklessly disturb an otter while it is occupying a structure or place which it uses for shelter or protection; obstruct access to any structure or place which it uses for that purpose; possess or control a live or dead animal, or part of; sell, offer for sale, possess or transport for the purpose of sale, a live or dead animal or part of one.

2.7 Water Voles

The water vole *Arvicola amphibius* received limited legal protection up until April 1998 through its inclusion in Schedule 5 of the WCA 1981 (as amended) for some offences. This protection was extended on 6th April 2008, so the water vole is now fully protected under Section 9.

Legal protection makes it an offence to:

- △ Intentionally kill, injure or take (capture) a water vole;
- △ Possess or control a live or dead water vole, or any part of a water vole;
- △ Intentionally or recklessly damage, destroy or obstruct access to any structure or place which water voles use for shelter or protection; or intentionally or recklessly disturb water voles while they are using such a place; and
- △ Sell, offer for sale or advertise for live or dead water voles.

2.8 Plant Species Prohibited from Release into the Wild

The handling and disposal of Japanese knotweed *Fallopia japonica* and giant hogweed *Heracleum mantegazzianum* is covered by several pieces of legislation. The main piece of legislation is Section 14(2) of the WCA 1981 (as amended) which states that 'if any person plants or otherwise causes to grow in the wild any plant which is included in Part II of Schedule 9, he shall be guilty of an offence'. Japanese knotweed and giant hogweed are listed in the Schedule. The Environmental Protection Act 1990 (as amended) is a broad ranging piece of legislation that singles out Japanese knotweed and giant hogweed for special mention. The Act places a 'Duty of Care' on the producer and anyone they employ to dispose of soil or other material contaminated with Japanese knotweed or giant hogweed, such material becomes a controlled waste, which can only be taken to licensed landfill sites who must be dealt with it in an appropriate way.

2.9 Hedgerows

Under the Hedgerows Regulations 1997 it is against the law to remove or destroy certain hedgerows without permission first being granted by the local planning authority (LPA). A hedgerow which has a continuous length of, or exceeding, 20 m, or is less than 20 m but adjoins another hedgerow at each end can be categorised as 'important' if it is 30 years old or older and satisfies at least one of the criteria listed in Part II of Schedule 1 of the Regulations. Therefore, the LPA must first grant permission for its removal.

2.10 Planning

With reference to the National Planning Policy Framework (NPPF), the Office of the Deputy Prime Minister 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 Data Search

A data search was undertaken by the Greater Lincolnshire Nature Partnership (GLNP) to identify statutory and non-statutory designated sites and protected and notable species within a 1 km radius of the centre of the Site. In addition, a search for designated sites for nature conservation on, or within 1 km of, the Site was performed using the Multi-Agency Geographic Information for the Countryside (MAGIC).

3.2 Extended Phase 1 Habitat Survey

The habitats on the Site and on adjoining land were surveyed on 6th July 2016 by a Delta-Simons ecologist using the standardised JNCC Phase 1 habitat classification and mapping methodology (JNCC, 2010). Dominant plant species were recorded in each different habitat. The plant species nomenclature follows that of Stace (2010).

The following list indicates the species groups that were targeted:

- △ Birds: All species with special reference to key species (such as those on Schedule 1 of the Wildlife and Countryside Act, 1981 (as amended) (WCA 1981)), England Biodiversity Priority Species (EBP) (previously UK Biodiversity Action Plan (UKBAP) species) and Birds of Conservation Concern (BoCC) (Eaton et al., 2015);
- △ Amphibians: GCN;
- △ Reptiles: common lizard, adder, slow-worm, grass snake; and
- △ Mammals: bat (all species), badger, water vole, otter.

3.2.1 Birds

Visual and/ or audible identification was made of any birds on the Site or flying over the Site during the survey period. Suitable habitat was, where possible, inspected and any evidence of nesting activity was recorded.

3.2.2 Amphibians

All terrestrial and aquatic habitats on the Site were assessed for their potential to support amphibian species.

A GCN Habitat Suitability Index (HSI) assessment was carried out to evaluate the suitability of the water bodies and adjoining habitats for GCNs (Oldham *et al.*, 2000). It is a quantitative measure of habitat quality.

The calculated HSI for a pond should score between 0 and 1, and is derived from an assessment of ten habitat variables known to influence the presence of newts. The HSI is categorised such that the closer to '1' the score is the more suitable a pond is to support GCNs. The HSI score is calculated on an individual pond basis, but takes into account surrounding terrestrial habitat and local pond density.

3.2.3 Reptiles

A cold-searching method was employed which involved identifying suitable habitats for reptiles within areas on-Site and immediately off-Site. Natural and artificial refugia (logs, large debris and so on) were lifted and examined for the presence of reptiles and their field signs (such as shed skins).

3.2.4 Bats

An assessment of Bat Roost Potential (BRP) of trees on the Site was completed (Collins, 2016). The survey methodology enables the categorisation of each structure and tree in relation to its value for bats. In addition, the suitability of the on-Site habitats to support foraging and commuting bats was also assessed (see Appendix II).

3.2.5 Badgers

The Site was inspected for badger activity including sett entrances, latrines, footprints, runs through vegetation, guard hairs caught on fences and snuffle holes.

3.2.6 Otters

Suitable habitats for otter were identified and assessed within areas on-Site and immediately off-Site.

3.2.7 Water Voles

Suitable habitats for water vole were identified and assessed within areas on-Site and immediately off-Site.

3.2.8 Hedgerows

An assessment of any hedgerows present at the Site, which will be adversely affected by the proposed development, was undertaken using the standard hedgerow surveying methodology outlined in the Hedgerow Regulations 1997. The purpose of

the assessment was to ascertain whether the hedgerows are classified as 'nationally important' and therefore protected under the Hedgerow Regulations 1997. The assessment involves a scoring system which relies on particular features, number of woody and floral species present within the hedgerow habitat, and the age of the hedgerow.

The following hedgerow features were recorded:

- △ A bank or wall supporting the hedgerow for at least half its length;
- △ Gaps in the hedgerow not exceeding 10% of its length;
- △ An average of at least one standard tree per 50 m of hedgerow;
- △ The number of woodland plant species (as defined);
- △ A ditch along at least half the hedgerow;
- △ Connections (as defined by the Regulations) scoring four points or more; and
- △ A parallel hedge within 15 m of the hedgerow.

An assessment of a 30 m section was undertaken per 100 m of hedgerow length, which involved recording the number of woody and floral species present. Where two or more sections of each hedgerow were surveyed, the average number of the species was calculated.

3.2.9 Other Protected or Notable Species

Where applicable, during the survey, evidence was recorded of any protected or notable species, including England Biodiversity Priority (EBP) species, which have not been acknowledged within this section of the Report. Habitats with the potential to support additional protected or notable species were also recorded, if present, during the survey.

3.2.10 Plant Species Prohibited from Release into the Wild

The occurrence of any invasive plant species on the Site was identified in terms of species and stand size.

3.2.11 Surrounding Area

The land beyond the Site boundary was surveyed. Where access was not available to these areas, observations were made from the Site boundary or via public land and highways.

4.0 RESULTS

4.1 Data Search

4.1.1 Habitats

The results of the MAGIC data search and the GLNP desk search indicate that there are no statutory designated sites on or within 1 km of the Site. The Site does lie within the Impact Zone of Surfleet Lows Site of Special Scientific Impact (SSSI), which is approximately 2.9 km north-east of the Site and supports wet alluvial meadows.

One non-statutory designated site, River Glen Corridor Local Wildlife Site (LWS), lies approximately 630 m north-west of the Site at its closest point. The LWS incorporates 20 km of the River Glen, which supports diverse aquatic vegetation, and its banks, including a stretch of Willow Tree Fen Nature Reserve.

4.1.2 Species

Birds

The following Schedule 1 (WCA, 1981, as amended) bird species were recorded within 1 km of the Site; kingfisher *Alcedo atthis*, peregrine *Falco peregrinus*, brambling *Fringilla montifringila*, whimbrel *Numenius phaeopus*, green sandpiper *Tringa ochropus*, redwing *Turdus iliacus*, fieldfare *Turdus pilaris*, barn owl *Tyto alba*, osprey *Pandion haliaetus*, red kite *Milvus milvus*, hobby *Falco subbuteo* and goshawk *Accipiter gentilis*.

Amphibians

Three recent records of common frog *Rana temporaria* were identified from 2009, the closest approximately 175 m south of the boundary. One recent record of smooth newt *Lissotriton vulgaris* was identified within the data search from 2009 approximately 540 m west of the Site.

Reptiles

A single recent grass snake *Natrix natrix* record was identified from 2011 approximately 550 m north-east of the Site boundary.

Terrestrial Mammals

A single record of otter was identified from 2006 along the River Glen, however, a precise location was not provided.

Six recent records of European water vole *Arvicola amphibius* were identified from between 2006 and 2012, the closest approximately 390 m west of the Site in 2012.

Five recent records of pipistrelle bat *Pipistrellus* spp including two roosts, were identified between 2008 and 2010, the closest is a sighting of three juveniles approximately 30 m west in 2008. A total of 29 recent records of unknown species of bats *Chiroptera* sp. were identified, including two roosts, between 2006 and 2013, with the closest a record of three individuals approximately 110 m north in 2012. Four common pipistrelle records *Pipistrellus pipistrellus* were identified from 2008 with the closest 600 m south of the Site. Three brown long-eared bat *Plecotus auritus* roosts were also identified from 2005 and 2006 within 1 km of the Site centre.

The results of the GLNP data search are available to the Client on request.

4.2 Extended Phase 1 Habitat Survey – Site

The Site is characterised by grassland fields with areas of tall ruderals and scattered trees bordered by ditches and hedgerows.

Figure 2 shows the extent of habitat types and boundary features. Descriptions of the habitat types and dominant plant species found at the Site are provided below. Habitat descriptions and codings are by broad habitat type, as listed in the Phase 1 Habitat Survey Manual (JNCC, 2010). Target Notes (TNs) are listed under Appendix III whilst photographs of the Site survey are located in Appendix IV.

A2.2 Dense Scrub

Dense bramble *Rubus fruticosus* agg. scrub was present adjacent to Spalding Road, and in the corner of the grassland to the north of the road.

A3.1 Broadleaved Scattered Trees

In the centre of the northern field were a group of pedunculate oak *Quercus robur* and cherry *Prunus avium*, with ash *Fraxinus excelsior* and cherry saplings. A number of mature crack willow *Salix fragilis* trees were recorded on the western boundary of the northern field.

Pedunculate oak, sycamore *Acer pseudoplatanus*, hawthorn *Crataegus monogyna* and elder *Sambucus nigra* formed a group within the northern field adjacent to the

ditch. The ground flora was limited to common nettle *Urtica dioica* and dense ivy *Hedera helix*, which extended up the tree trunks. A further two hawthorn with ivy growth were present within the field.

North of the central road was a group of trees supporting cherry, sycamore, ash, beech *Fagus sylvatica*, field maple *Acer campestre* and dog rose *Rosa canina*.

South of the road three sycamore and a horse chestnut *Aesculus hippocastanum* and sycamore lie either side of the entrance to the off-Site eastern residential property. On the western boundary are trees including wych elm *Ulmus glabra*, sycamore, horse chestnut, hawthorn, cherry, large-leaved lime *Tilia platyphyllos*, pedunculate oak and ash with elder and yew *Taxus baccata* saplings. Bramble, common nettle, ivy, great willowherb *Epilobium hirsutum* and hedge bindweed *Calystegia sepium* were recorded around the base of the trees.

Scattered trees in the south-west include an ash and pedunculate oak, whilst pedunculate oak and a sycamore were present in the south-east and a willow was recorded to the east.

B5 Marshy Grassland

A wetter area of ground extended in the north of the Site supporting 5 – 10 cm of water with hard rush *Juncus inflexus*, soft rush *Juncus effusus*, bulrush *Typha latifolia* and duckweed *Lemna minor* recorded (Photograph 1).

B6 Poor Semi-Improved Grassland

All the fields support unmanaged grassland which had become very dense in places and up to 1.5 m tall. Yorkshire Fog *Holcus lanatus*, false oat-grass *Arrhenatherum elatius*, cock's-foot *Dactylis glomerata*, meadow oat grass *Avenula pratensis*, perennial rye grass *Lolium perenne*, rough meadow grass *Poa trivialis*, bent *Agrostis* sp. and couch grass *Elytrigia repens*, were all abundant, with occasional mugwort *Artemisia vulgaris*, meadow buttercup *Ranunculus acris*, red fescue *Festuca rubra*, hemlock *Conium maculatum*, dog rose, hard rush, common reed *Phragmites australis*, goat willow *Salix caprea* saplings and ruderal species, listed below, recorded. In addition to the above species, the southern grassland (Photograph 2) also supported occasional rosebay willowherb *Chamerion angustifolium*, tufted hair grass *Deschampsia cespitosa*, bristly ox-tongue *Helminthotheca echioides*, cow parsley

Anthriscus sylvestris, white clover *Trifolium repens*, selfheal *Prunella vulgaris*, silver birch *Betula pendula* saplings, common vetch *Vicia sativa*, tutsan *Hypericum androsaemum*, pendulous sedge *Carex pendula* and greater stitchwort *Stellaria holostea*. Within both halves were also dense patches of wood small reed *Calamagrostis epigejos*.

C3.1 Tall Ruderals

Areas within the grassland and adjacent to the hedgerows were areas dominated by common nettle and creeping thistle *Cirsium arvense*, with occasional spear thistle *Cirsium vulgare*, great willowherb, rosebay willowherb, cleavers *Galium aparine*, hedge bindweed, bramble and broadleaved dock *Rumex obtusifolius*.

The vegetation south of the western on-Site ditch and along the bank of the western off-Site ditch comprised dense common nettle, with frequent creeping thistle, greater willowherb and hedge bindweed, and occasional bittersweet *Solanum dulcamara* and spear thistle.

G1 Standing Water

Two ditches approximately 1 m wide containing shallow standing water bisect the northern field. Each had bare banks and supported limited shallow water covered with duckweed (Photograph 3).

J1.2 Amenity Grassland

Adjacent to the hardstanding was managed grassland with species recorded including annual meadowgrass *Poa annua*, perennial rye grass *Lolium perenne*, white clover *Trifolium repens* and daisy *Bellis perennis*.

J2.1.2 Intact Species-Poor Hedgerow

East to west across the southern field was a hedgerow (Photograph 4) comprising hawthorn, blackthorn *Prunus spinosa*, cherry plum and red plum *Prunus cerasifera* spp., elder and dog rose, with ground flora comprising creeping thistle, bramble, common nettle and great willowherb.

The southern hedge of the northern field was unmanaged and overgrown. Species recorded include elder, sycamore, field maple, silver birch, horse chestnut, walnut *Juglans regia*, and cherry and ash saplings.

The south-western boundary was predominantly wild privet *Ligustrum vulgare* with occasional hawthorn, fruit trees and dog rose. The hedgerow continued northwards and was unmanaged on the Site side with species recorded including cherry, sycamore, hawthorn and elder with occasional large leaved lime, ash, wych elm, and pedunculate oak.

A managed hawthorn hedgerow, approximately 4 m high, formed the boundary with the property to the east.

A leylandi *Cupressus x leylandii* hedgerow extended along the northern boundary, however, the eastern trees were bare likely due to the unfavourable adjacent marshy conditions.

J2.2.2 Defunct Species-Poor Hedgerow

The north-eastern hedgerow was unmanaged and comprised hawthorn with occasional ash, rose, field maple and yew saplings. Ivy formed the base and was encroaching into the grassland.

Further defunct hedgerow divided the northern fields parallel to the ditches. This comprised unmanaged hawthorn, elder, ash and occasional holly and dog rose with dense ivy around the base and extending up the trees.

The north-western hedgerow was up to 10 m high and unmanaged. It comprised hawthorn, elder and dog rose with occasional yew saplings, wych elm, ash and sycamore and holly in the south.

Hawthorn hedgerow with occasional sycamore, dog rose, ivy, ash and walnut occurring, with ground flora dominated by ivy, extended along the south-eastern Site boundary. A short length dominated by hawthorn and blackthorn extended northwards from this.

J2.6 Dry Ditch

A length of dry ditch extended amongst the hedgerow that ran west to east in the southern field.

J4.1 Hardstanding

A concrete road divided the two main areas of the Site with a further length leading to the eastern property. A cattle grid was present at the entrance with Spalding Road.

4.2.1 Birds

Jay *Garrulus glandarius*, woodpigeon *Columba palumbus*, pheasant *Phasianus colchicus*, blackbird *Turdus merula*, wren *Troglodytes troglodytes*, reed bunting *Emberiza schoeniclus*, moorhen *Gallinula chloropus*, tree sparrow *Passer montanus* and kestrel *Falco tinnuculus* were all recorded during the survey. There were habitats featured on the Site that are suitable for nesting birds, including the hedgerows, trees and long grassland, especially within the southern area of the Site where it contained less ruderals. Old nests were recorded within the hedgerows and trees and juvenile pheasants, which may have been released, were recorded within the southern-most field. A barn owl box was also identified within the field adjacent to the northern Site boundary (TN13).

Tree sparrow is listed on the Red List of Birds of Conservation Concern (Eaton *et al.*, 2015) and is an EBP species recorded, whilst reed bunting is also an EBP species.

It should be noted that this is not a comprehensive inventory of the bird species which may be present at the Site.

4.2.2 Great Crested Newts

The terrestrial habitat at the Site offers foraging and sheltering opportunities for GCN should they be present within the local area. The marshy area at the Site supports rushes and duckweed indicating it is regularly wet, however, the water was patchy and is likely to dry regularly making it unsuitable for breeding amphibians. The on-Site ditches and those parallel to the Site offer standing water, however, they are likely to dry regularly given the depth of the water at the time of the survey, whilst the lack of aquatic vegetation also made them unsuitable for breeding. The north-western ditch (Waterbody 1- see Figure 2), immediately off-Site, becomes wider adjacent to the churchyard and, therefore, has been assessed for its ability to support GCN in Section 4.3.

A review of aerial photographs and OS maps revealed the presence of a pond 30 m to the west of the Site within an area of trees in a residential garden, with good connectivity to the Site and newts, if present, would have the ability to cross the Site

via the ditch. A length of ditch adjacent to Spalding Road lies approximately 40 m west of the boundary and is connected to the Site by trees and a residential garden. A second pond lies approximately 100 m from the eastern Site boundary beyond the residential property. Approximately 125 m east of the north-eastern Site boundary is a third pond within an area of woodland on the southern edge of an arable field. Whilst arable land does not offer ideal habitat for GCNs, the woodland is anticipated to, and there is a ditch containing standing water along the edge of the woodland that connects to the Site which is suitable for GCN to commute along and cross. A fourth pond lies 150 m west of the Site boundary, however, this is set within an area of woodland fragmented from the Site by Spalding Road, which would deter GCN from crossing it should they be present. No records of GCN were included within the data search.

4.2.3 Reptiles

During the survey no evidence of reptiles was recorded on the Site, however, a grass snake was recorded within the grassland during a previous Site visit on 4th July 2016. The long vegetation at the Site and its unkept nature offers good shelter and foraging for reptiles, especially grass snake which will also use the ditches, with the grassier areas providing the most suitable habitat. The majority of the vegetation in the north of the Site was cut back on the 8th July 2016 under the supervision of an ecologist to a height of approximately 15 cm to enable site investigation works to proceed. It would deter reptiles if it was maintained at this height, however, the southern grassland remains mainly unkept. A wood pile was present within the northern field (TN1, Photograph 5) and was approximately 3 m high and comprised old trunks and brash, which would provide shelter and hibernating opportunities for reptiles and, therefore, was given a 2 m buffer during the vegetation clearance. One record of grass snake was included within the data search at a distance of approximately 550 m from the boundary in 2011 and, in addition, anecdotal evidence was provided by the owner of an adjacent property indicating sightings within their garden of both grass snake and adder *Vipera berus*.

4.2.4 Bats

A number of trees across the Site were recorded to have features suitable for roosting bats and have been assessed as having low BRP. Two willow trees and an ash on the western boundary (TN 2) were identified, one willow for supporting a large branch wound, and the second and the ash, for dense ivy growth. An ash supporting thick ivy stems along the trunk was recorded within the eastern boundary (TN 3), whilst within the cluster of trees in the northern field two sycamores and an oak were found to

support dense ivy (TN 4). A silver birch within the hedgerow adjacent to the western property (TN 5, Photograph 6) was covered in dense ivy around the whole trunk, potentially creating gaps for roosting bats, or disguising other features, such as cavities. The central sycamore south of the hardstanding supported a branch wound (TN 6), the horse chestnut on the boundary at the entrance to the adjacent property also had a hole on the trunk (TN 7) and, within the scattered trees on the western boundary (TN 8), was an ivy clad sycamore and a horse chestnut supporting dense ivy which hid the trunks. A willow on the eastern boundary supported both a crack in the bark and a branch wound (TN 9). Ivy covered an ash (TN 10) on the south-eastern boundary hiding potential trunk damage and creating gaps. An ivy clad oak in the south-east supported trunk and branch damage creating gaps (TN 11, Photograph 7), and an ash in the south-western corner also supported dense ivy growth (TN 12).

The hedgerows and ditches at the Site and adjacent to the boundary offer good linear commuting and foraging features for bats, whilst the on-Site grassland and ruderals also offer foraging opportunities. Street lighting is present along Spalding Road adjacent to the south-western boundary and limited light spill is possible from the adjacent properties north of the central road.

A number of records of bats were within the data search, including seven roost sites. The closest record to the Site was of three juvenile pipistrelle 30 m west in 2008.

4.2.5 Badgers

The Site did not support any evidence to indicate that badgers were using or inhabiting it. There were no sett entrances, latrines, snuffle holes, mammal runs or badger dung found within the survey area. There were no records of badger within 1 km of the Site and there are, therefore, no further recommendations for the species at the Site.

4.2.6 Otters

The ditches on-Site were unsuitable for otter due to their shallow depth, narrow channel and un-vegetated nature. The ditches are connected as part of a wider drainage system around the arable fields which link into the Blue Gowt Drain to the east. Three ditches parallel to the Site and Blue Gowt Drain are assessed in Section 4.3.

No trees along the Site boundary that supported the Drain or ditches appeared to offer any crevices or holes for an otter to shelter or create a holt. A single record of otter

was identified from 2006 along the River Glen, however, a precise location was not provided.

4.2.7 Water Voles

The on-Site ditches supported limited grass bank tops for foraging, however, generally there was no cover and the banks were steeply profiled and comprised bare earth, which would leave any burrows exposed. Both ditches supported shallow, duckweed-covered water which was at a depth unsuitable for swimming. Shading was created along both ditches by the ruderal vegetation within the field, and along part of the eastern ditch from the tree group to the south, further deterring water vole. The ditches lead into further lengths of ditch parallel to the north-western and north-eastern boundaries, assessed in Section 4.3. Six recent records of water vole were identified within the data search with the closest within approximately 390 m of the Site.

4.2.8 Other Protected Species

There was no evidence of other protected species, or habitats that could support them, on the Site.

4.2.9 Plant Species Prohibited from Release into the Wild

Invasive plants such as Japanese knotweed, Himalayan balsam and giant hogweed were not recorded on the Site.

4.2.10 Hedgerows

No hedgerow at the Site supported the sufficient number of woody or woodland species necessary in a 30 m length to be assessed as being 'Important' according to the Hedgerow Regulations (1997). The hedgerow dividing the southern field supported a number of fruiting species, however, these are not native and do not count towards the number of woody species.

4.3 Extended Phase 1 Habitat Survey – Land Adjoining the Site

To the north of the Site is grassland, whilst to the east lie ditches supporting standing water, arable fields and further unmanaged grassland and a residential property within extensive grounds. To the south is Blue Gowt Drain with residential properties beyond and to the west is Spalding Road and properties within Pinchbeck village, a ditch supporting standing water, and the local church, St Mary Church of England.

Blue Gowt Drain, adjacent to the southern boundary, supported water approximately 1 m deep in places, and was up to 5 m wide (Photograph 8). Limited duckweed and common reed were recorded within the water and the channel became narrower and more dominated by reed and duckweed towards the east leading away from the Site. The banks appeared to be steep and were heavily vegetated by grasses, ruderals and trees within the west. Blue Gowt Drain would offer suitable conditions for otter to swim and likely supports fish for foraging and the drain also leads into the River Glen and the River Welland offering connectivity into the wider area. No trees along the banks of the drain appeared to offer any crevices or holes for an otter to shelter or create a holt, nor was any dense scrub recorded on the banks. The drain would provide good conditions for water vole given the profiled vegetated banks, the depth of the water, and the amount of common reed within the channel.

The north-western ditch was heavily overshadowed by the trees, hedgerow and ruderals along the Site boundary, and by further trees within the adjacent residential garden and churchyard. The water channel was approximately 1 m wide in the south, widening to 3 m where it was adjacent to the churchyard before narrowing again further northwards. The water within the ditch was shallow, approximately 20 cm at its deepest, and where it was clear appeared to contain a large amount of leaf litter, whilst the water in the southern end was covered in a dense layer of duckweed and contained debris including an old tree. Limited common reed and rushes were recorded within the water channel towards the northern end of the ditch, which appeared to continue northwards beyond the north-western corner of the Site. The bank profile was approximately 45° in the southern extent, however, it became shallower heading northwards.

The north-eastern ditch was also heavily over-shaded by the on-Site hedgerow and supported shallow water, approximately 10 cm at its deepest with no aquatic vegetation recorded (Photograph 9). The ditch banks were approximately 30° and covered with limited ruderal vegetation. The remainder of the ditch south of the hedgerow, approximately 10 m, and continuing off-Site to the east supported dense common reed along the banks and within the channel which limited visibility. The banks appeared to be steep, approximately 60°, and water was visible, however, the level could not be gauged. Occasional hawthorn, elder and rose were recorded along the bank tops.

The south-eastern ditch was also heavily shaded with limited common nettle and ivy recorded along the banks which were approximately 30°. The water was approximately 10 cm deep and supported leaf litter and no aquatic vegetation other than a small patch of common reed was recorded.

A GCN HSI assessment was undertaken of the north-western ditch (Waterbody 1, Photograph 10) where it becomes wider and appeared to regularly support more water, the results of which are provided in Table 1 (below).

Table 1 - Habitat Suitability Index Assessment

Variables of Habitat Suitability		Waterbody 1
SI1	Location	1
SI2	Pond area	0.2
SI3	Pond drying	0.5
SI4	Water quality	0.33
SI5	Shade	0.4
SI6	Fowl	1
SI7	Fish	1
SI8	Ponds	0.7
SI9	Terrestrial habitat	1
SI10	Macrophytes	0.3
	Habitat Suitability Index	0.55
		Below Average

The overall HSI scores for the pond is 0.55. With reference to the criteria specified within the methodology (Section 3.3.2) the likelihood of GCNs occurring within the pond is 'Below Average'. Although this section of the ditch has been assessed as not being suitable for supporting breeding GCN, like the remaining lengths of ditch, it would offer a crossing point for GCN should they be within the wider area and could potentially be used as a refuge for GCN on their way to or from a pond.

No banks of any of the three ditches parallel to the Site appeared to support features to form a possible otter holt, however, access was limited in places where the vegetation was dense. The ditches themselves also did not offer water deep enough for otter to swim or hunt in and, despite being connected to a wider network, they are unlikely to venture as far as the northern ditches given more suitable conditions are available within Blue Gowt Drain.

The combination of shading, shallow bank profiles, bare banks and water depth make the majority of the lengths of the three parallel ditches unsuitable for water vole. The short length of the north-eastern ditch supporting common reed and heading eastwards away from the Site has potential for water vole given the bank profiles and reduction in shading.

5.0 CONCLUSIONS AND RECOMMENDATIONS

5.1 Conclusions

The majority of the Site comprises unmanaged grassland with areas of ruderals and scrub around parts of the field edges. Scattered trees were present within the northern two grassland areas, either side of the central road and around the Site boundary, whilst hedgerows bounded much of the Site and divided the northern and southern fields. A small area of amenity grassland was present south of the central road and an area of marshy grassland lay adjacent to the northern boundary. Two short lengths of ditch divided the northern field and lead into further ditches off-Site.

No statutorily designated site lies within 1 km of the Site, however, the Site does lie within the Impact Zone of Surfleet Lows Site of Special Scientific Impact (SSSI), which lies approximately 2.9 km north-east of the Site. The River Glen Corridor LWS, lies approximately 630 m north-west of the Site boundary. Given the distance of the Site from both wildlife sites it is anticipated that there will be no adverse effect created from the proposed development.

The hedgerows and trees at the Site were suitable for nesting birds and the long grassland, especially within the south of the Site where it contained less ruderals, offered potential for ground nesting species. The majority of the trees and hedgerows are to be retained at the Site as part of the development with additional trees and shrubs to be planted. The majority of the grassland will be lost at the Site to facilitate the proposed development, however, other than to allow the installation of the access road, the central grassland will be left with a continuation of the fields to the east.

Although the ditches at, or parallel to, the Site are not suitable to support breeding GCN, the Site does offer suitable terrestrial habitat for the species and a further three ponds and a ditch within 175 m are suitably connected to the Site, the closest of which is 30 m from the boundary. The boundary features are due to be retained at the Site, however, large amounts of the grassland will be lost as part of the development which may impact dispersing GCN should they be breeding within the wider area and utilising the Site. Further survey works are, therefore, required to ascertain the suitability of the surrounding ponds to support this species, where access permits.

Grass snake are known to be within the local area and the long grassland vegetation at the Site offers suitable shelter and foraging for reptiles, with a wood pile in the northern field offering further shelter and hibernating opportunities. Although vegetation cutting was undertaken to allow access for site investigation works, large areas of uncut suitable vegetation remains in the southern field and around the boundaries and log pile. The majority of the grassland will be lost to facilitate the development and the log pile will also require removal, which will reduce the suitable habitat at the Site for reptiles. Further survey works are required to determine how reptiles are utilising the Site, and the population size, so that appropriate mitigation can be put in place.

A number of trees at the Site have been assessed as having low BRP and the boundary features also provide good commuting and foraging. According to the development plan, these trees are due to be retained, however, should any of the trees require works, further surveys will be required to determine their use by bats, and the requirement for any mitigation.

Blue Gowt Drain offers suitable commuting and foraging habitat for otter. The drain is not due to be impacted by the development, however, if otter are utilising the drain there is the potential for them to venture onto Site and become trapped.

Although no signs of water vole were recorded during the survey, the banks of Blue Gowt Drain do provide suitable burrowing and foraging habitat, and the short length of ditch containing common reed adjacent to the north-eastern Site boundary also offers suitable conditions and cover. Whilst it is understood that the proposed development plans will not impact upon Blue Gowt Drain, should works be required within 5 m of the drain or the short length of ditch, further survey for water vole may be required to determine the requirement for any mitigation.

5.2 Recommendations

Recommendation 1 (Nesting Birds)

- △ If any habitat removal or felling works are to be undertaken of the scattered trees, hedgerow or grassland featured on the Site, these should be performed either before early March or after late July in order to avoid the main bird nesting season. Conflict with the development can be avoided by clearing the Site of

any suitable nesting habitat outside of the breeding period in advance of any proposed works; and

- △ If, however, Site clearance works are deemed necessary during the nesting period an experienced ecologist will be required to check the Site habitats immediately prior to works commencing to confirm that no nesting birds will be affected by the proposed works.

Recommendation 2 (GCN)

In order to determine the current presence /likely absence of GCN at the Site, it is recommended that HSI calculations are made of the three ponds and ditch identified within 500 m of the Site and surveys undertaken of any pond that is assessed as having an Average or above likelihood of this species. If GCNs are present within habitats within 500m of the Site, it may be necessary to apply for an EPSL from Natural England prior to commencing construction works. An application for the licence cannot be made until full planning permission has been granted.

Recommendation 3 (Reptiles)

It is recommended that a reptile survey is undertaken to establish the extent of the population of reptiles present at the Site, and to determine how they are using the Site. This would involve a total of seven visits to the Site to check natural and artificial refugia for the presence of reptiles. The surveys can be undertaken from late March until October during suitable weather conditions. If reptiles are present, a mitigation programme will be required to enable the proposed works to proceed without the potential for harm to these species.

Recommendation 4 (Bats)

Given the number of trees assessed as having low BRP and the lengths of the boundary features offering commuting and foraging opportunities, it is recommended that a transect survey is undertaken at the Site both in summer and autumn to measure the amount of bat activity at the Site and to determine the potential impacts resulting from the proposed development, such that appropriate mitigation can be put in place.

If trimming or felling works are required to any of the trees assessed as having low BRP, it is recommended that a licensed bat ecologist checks the trunk for any signs of bats and bat activity prior to any works taking place. Nocturnal surveys may be

required to inform an EPSL application to undertake the works, should a tree be found to be supporting roosting bats.

The boundary hedgerows at the Site may provide suitable habitat for commuting and foraging bats and well as suitable habitat and connectivity for other wildlife. It is recommended that, where possible, these hedgerows are retained and that a sensitive lighting plan is developed such that the proposed development does not increase lighting along these habitats.

Recommendation 5 (Otter)

Whilst no evidence of otter was recorded at the time of the survey, as is general good practice for Sites where otters may occur, it is recommended that no excavations or trenches are left uncovered overnight during the development works in order to prevent any otters from becoming trapped. Alternatively, ramps can be provided to enable them to climb out of trenches or excavations.

Recommendation 6 (Water Vole)

If any works are required within 5 m of Blue Gowt Drain or the short length of the north-eastern ditch, a water vole survey should be undertaken of the watercourses in order to determine the presence/ likely absence of this species and to assess the impact of the proposed works. The survey will require up to two visits to determine the extent of water vole activity along the Drain and ditch, ideally one survey should be undertaken between mid-April and June, and a second July to September, inclusive, with at least two months between surveys.

Recommendation 7 (Pollution Prevention)

Contractors should adhere to best practice procedures with regards to pollution prevention and working near watercourses.

Recommendation 8 (Planning)

Following the issue of the National Planning Policy Framework (NPPF, 2012) by the Department for Communities and Local Government (DCLG), *“The planning system should contribute to and enhance the natural and local environment by: Minimising impacts on biodiversity and providing net gains in biodiversity where possible, contributing to the Government’s commitment to halt the overall decline in*

biodiversity...”; and, therefore, for this particular development we recommend the following:

- △ The use of native plant species sourced from local nurseries is recommended in landscape proposals to enhance foraging opportunities for local birds and bats, by increasing the invertebrate diversity on-Site. A species list of recommended trees and shrubs is given below:

- △ Beech *Fagus sylvatica*;
- △ Elder *Sambucus nigra*;
- △ Field maple *Acer campestre*;
- △ Silver birch *Betula pendula*;
- △ Rowan *Sorbus aucuparia*;
- △ Small-leaved lime *Tilia cordata*;
- △ Bird cherry *Prunus padus*;
- △ Blackthorn *Prunus spinosa*;
- △ Hazel *Corylus avellana*;
- △ Hawthorn *Crataegus monogyna*;
- △ Holly *Ilex aquifolium*;
- △ Honeysuckle *Lonicera periclymenum*;
- △ Wild privet *Ligustrum vulgare*;
- △ Walnut *Juglans regia*; and
- △ Guelder-rose *Viburnum opulus*.

- △ Installation of four bird nest boxes (two suitable for small hole nesting birds such as blue tits and great tits, one open fronted box suitable for robins and wrens, and a terrace nest box suitable for house sparrows). Apart from the terrace nest box, which should be installed under the eaves of a residential building, they should be placed on suitable trees around the Site. All boxes should be installed in a sheltered and undisturbed position at a height of at least 3 m, and avoiding a southerly aspect; and
- △ Installation of two bat boxes (including one Schwegler 2F bat box and one Schwegler 1FF bat box, or similar products) on appropriate trees at the Site. These should be placed to avoid a northerly aspect, at a height of at least 3 m in order to avoid disturbance from humans or predators and in an area least likely to be affected by noise and light spill, and close to trees for cover.

Delta Simons can provide further advice on the type and locations of bird and bat boxes for the Site once the final development plans are known.

6.0 LIMITATIONS OF SURVEY

6.1 Limitations

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.

Whilst every effort was made to access all parts of the Site, not all external regions were able to be accessed for the inspection. Delta-Simons had not obtained permission to access the residential buildings near to the Site. It should be noted that on a single inspection it is not possible to define the presence or absence of many species.

6.2 Disclaimer

The recommendations contained in this Report represent Delta-Simons' professional opinions, based upon the information referred to in Section 1.0 of this Report, exercising the duty of care required of an experienced Ecology Consultant. Delta-Simons does not warrant or guarantee that the Site is free of Bats or other protected species.

No part of the survey included an assessment of the materials and conditions of any buildings. No part of the survey included an asbestos assessment, nor did it represent an appraisal of other deleterious materials or hazardous substances.

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 1.0 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

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This Report was prepared by:



Catherine Bywood

Ecologist

Date 29th July 2016

This Report was reviewed and authorised by:

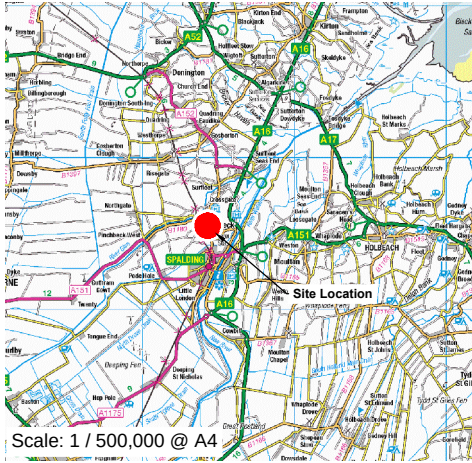


Charlotte Sanderson

Associate and Ecology Team Leader

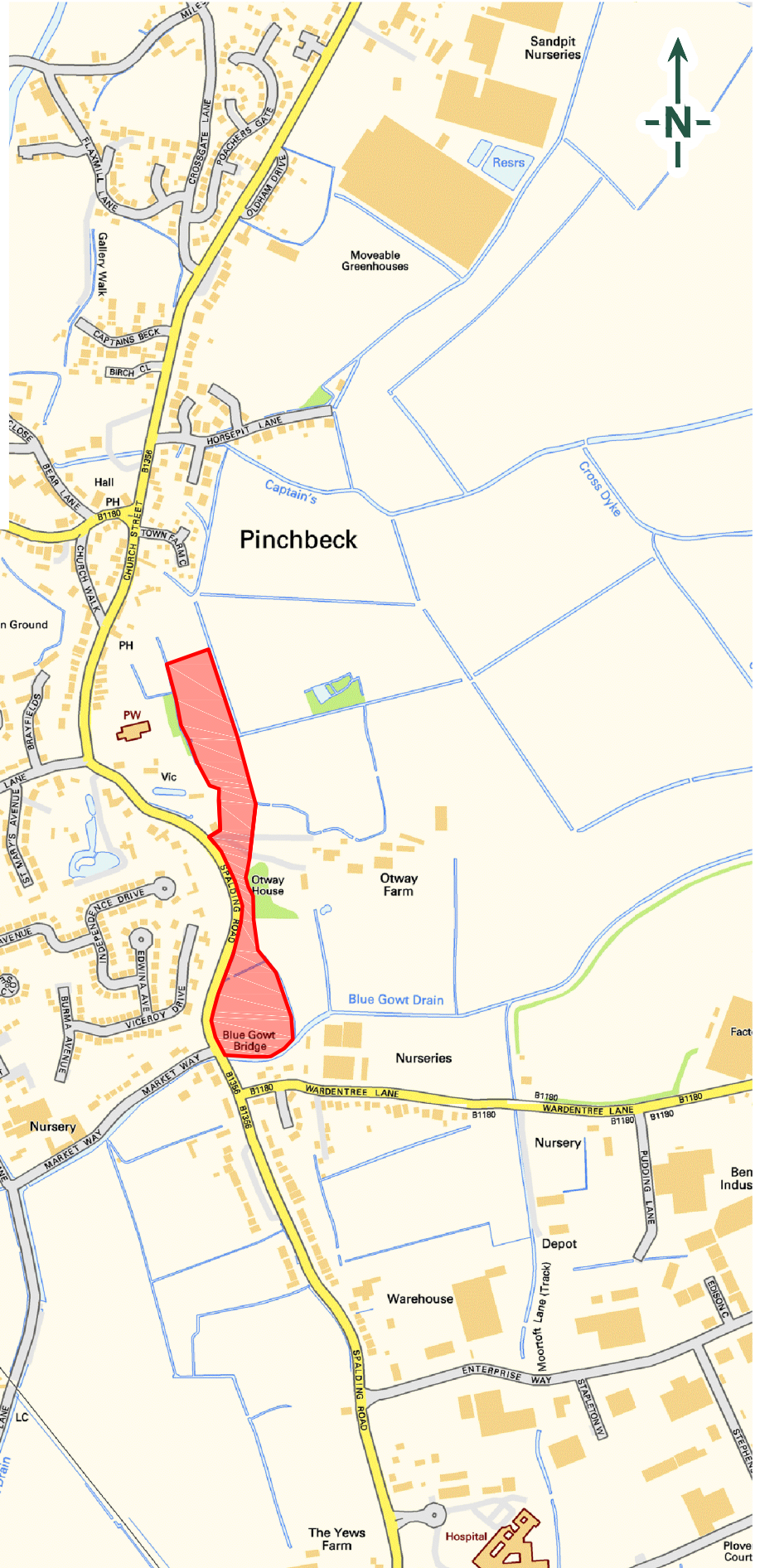
Date 29th July 2016





LEGEND

 Site Boundary



Scale: 1 / 10,000 @ A4

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TITLE:
Site Location Map
Land Off Spalding Road
Pinchbeck

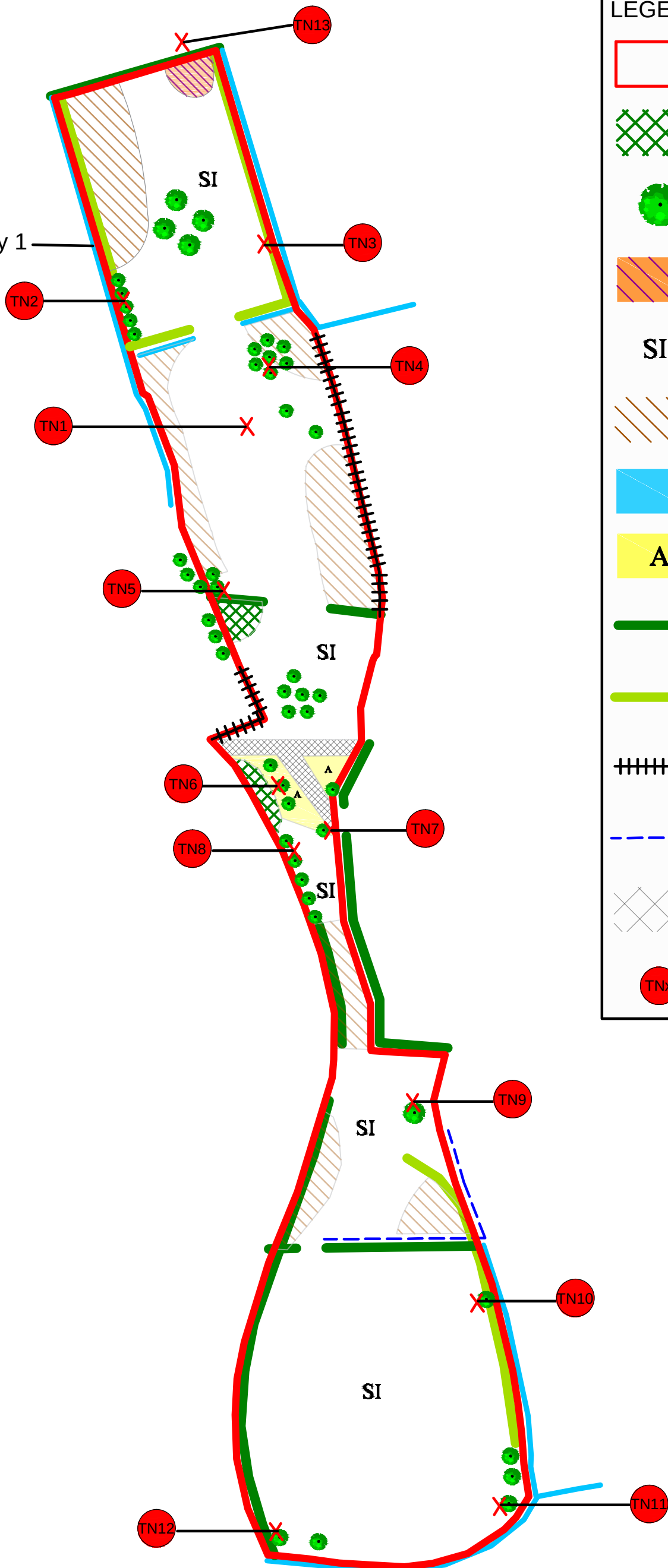
DRAWN BY:
EN
CHECKED BY:
CB
DATE:
25 July 2016

SCALE:
To Scale@A4
REVISION:
1

PROJECT NO:
16-0323.02
FIGURE NO:
1



Waterbody 1



LEGEND

- Site Boundary
- Dense Scrub (A2.1)
- Scattered Broadleaved Trees (A3.1)
- Marshy Grassland (B5)
- Poor Semi-Improved Grassland (B6)
- Tall Ruderals (C3.1)
- Standing Water (G1)
- Amenity Grassland (J1.2)
- Intact Species - Poor Hedgerow (J2.1.2)
- Defunct Species - Poor Hedgerow (J2.2.2)
- Fence (J2.4)
- Dry Ditch (J2.6)
- Hardstanding (J4.1)
- Target Note

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	TITLE: Proposed Development Plan Land Off Spalding Road Pinchbeck	DRAWN BY: EN	SCALE: Not to Scale	PROJECT NO: 16-0323.02
		CHECKED BY: CB	REVISION: 1	
		DATE: 25 July 2016		FIGURE NO: 3





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Guidance on Assessing the Potential Suitability of Development Sites to Support Bats
(adapted from Collins, J. (ed)).

Suitability	Description	
	Roosting	Commuting and Foraging
Negligible	An inspected structure or tree which is considered to have no features of importance for roosting bats. No further constraints apply to the method or timing of proposed works.	Negligible habitat features on-Site to support commuting or foraging bats
Low	A structure with at least one or more features suitable to support opportunistic individual bats. However, inadequate space, shelter, protection and conditions, and the low suitability of surrounding habitats means that it is unlikely to be used as a maternity or hibernation roost site. A tree of adequate age and stature to support potential roosting features, however, either no features, or only features of limited potential recorded from the ground.	Habitat with potential to support low numbers of commuting bats due to its quality and connectivity. For example, a gappy hedgerow or unvegetated stream that is isolated from the surrounding landscape. Alternatively, suitable but isolated habitats suitable to support low numbers of foraging bats such as a lone tree or a patch of scrub.
Moderate	A structure or tree with one or more potential roost sites that are of adequate size, shelter and protection, with suitable conditions and surrounding habitat to support a bat roost not of high conservation status (with respect to roost type not individual species conservation status).	Linear habitat continuity connecting to the wider landscape offering potential to support commuting bats, such as rows of trees and scrub or linked back gardens. Habitat such as trees, scrub, grassland or a waterbody with connectivity to the wider landscape offering foraging opportunities for bats.
High	A structure or tree with one or more potential roost sites that are suitable for use by large numbers of bats on a regular basis and for long periods of time due to their size, shelter, protection, conditions and the surrounding habitat.	Continuous high-quality habitat with strong connectivity to the wider landscape that is likely to be used by commuting bats on a regular basis, such as flowing waterbodies, hedgerows, rows of trees and woodland edges. High quality habitat with strong connectivity to the wider landscape that is likely to be regularly used by foraging bats, such as broadleaved woodland, tree-lined watercourses and grazed parkland. Site is close to, and connected to, known roost sites





Target Notes

Target Note 1	Log pile within grassland
Target Note 2	Two willow trees and an ash with Low BRP
Target Note 3	Ash tree with thick ivy stems
Target Note 4	Oak tree with dense ivy
Target Note 5	Silver birch supporting dense ivy around the trunk
Target Note 6	Sycamore tree with branch wound
Target Note 7	Horse chestnut with low BRP
Target Note 8	Ivy clad sycamore and horse chestnut
Target Note 9	Willow tree with a crack in the bark and branch wound
Target Note 10	Ash tree with dense ivy growth
Target Note 11	Ivy clad oak tree with trunk and branch damage
Target Note 12	Ash with dense ivy growth
Target Note 13	Barn owl box adjacent to northern Site boundary



**Land off Spalding Road, Pinchbeck
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Photograph 1 – Marshy area in the north of the Site



Photograph 2 – The southern grassland at the Site

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Delta-Simons Project No. 16-0323.02**



Photograph 3 – Eastern section of on-Site ditch



Photograph 4 – Hedgerow dividing the southern field

**Land off Spalding Road, Pinchbeck
Delta-Simons Project No. 16-0323.02**



Photograph 5 – Log pile in the northern field

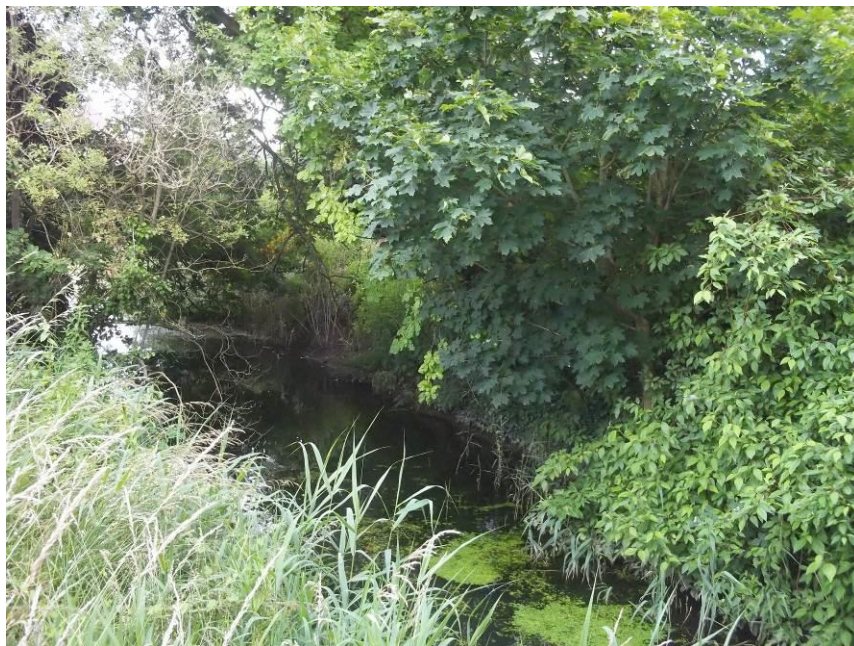


Photograph 6 – Densely ivy clad silver birch

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Photograph 7 – Oak with trunk damage

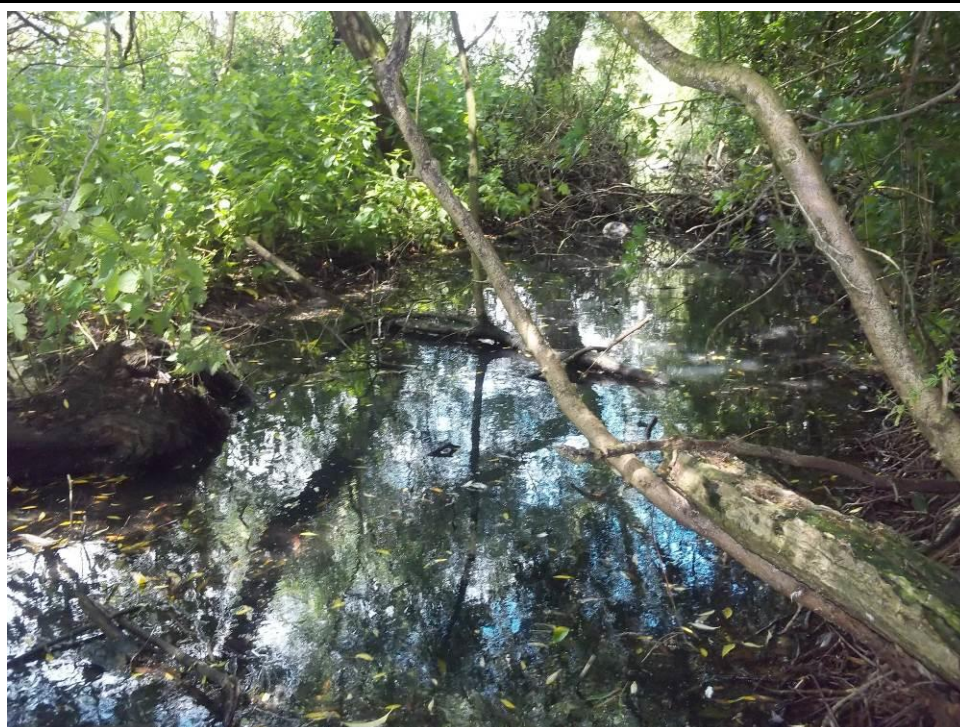


Photograph 8 – Western extent of Blue Gowt Drain to the south of the Site

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Photograph 9 – The north-eastern ditch adjacent to the boundary



Photograph 10 – Waterbody 1 adjacent to the north-western boundary