

**Land at Junction of A1136 and
A180(T),
Grimsby**

Ecological Survey

03 January 2006

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DRAWINGS

2208LP/05 – Phase 1 Habitat Plan

Version history

VERSION	DATE	COMMENT
1 (final)	03 January 2006	

This document has been prepared and checked in accordance with BS EN ISO 9001 : 2000

1.0 Background

1.1 Introduction

The site is located south of the A180 trunk road and to the west of Grimsby at OS grid reference TA 237 107 (See Figure 1). The site consists of arable fields and boundary features including species-poor hedgerows and/or ditches. An access track is present which runs through the centre of the site before turning north to cross over the A180 trunk road. The southern boundary is fenced and a railway runs its entire length. The railway is embanked to a height of 3m and the vegetation on the banks consists of tall-herb stands, rough grassland and patches of dense scrub.

1.2 Proposed works

Grimsby Town Football Club wish to develop land to the west of Town's Croft Drain. The development proposal includes a sports stadium, a non food retail development, park and ride facility and associated facilities and structures.

1.3 Aims of the study

LDA Design have been commissioned to carry out an ecological survey of the site in order to provide a preliminary ecological assessment, and to identify habitats or species that may affect the proposed development.

2.0 Methodology

2.1 Field survey

Mark Woods MIEEM and Katy Stiles MIEEM, Senior Ecologists undertook a field survey on the 5-December 2005 between 1030 and 1345hrs. The weather was dry and cold, with sunny intervals. The site was walked over and the habitats were described.

A check for signs of protected species was made throughout the site. Habitats were assessed for their suitability for protected species. In particular, the large ditch that flows through the site was surveyed to determine the presence of water vole by checking for evidence of field signs, such as burrows, footprints, latrines and feeding remains.

3.0 Results

3.1 Field survey

3.1.1 Habitat description

Refer to drawing no. 2208LP/05 Phase 1 Habitat Map for locations of features described.

The site is located on flat ground and surrounded by roads to the north and west, a railway line to the south and housing development to the east. There are five arable fields, which had been recently sown with a crop. Field boundaries are a mix of steep-sided drainage ditches, a hedgerow with a ditch, relict hedgerows and fences, of various design and materials. Alongside the access track and field boundaries, strips of species-poor neutral grassland are present. Only the grass strips alongside the track appear to have been managed.

Photograph 1 View looking west across the site and including the access track



Target Note 1 Town's Croft Drain

The ditch flows from south to north and is approximately 2m wide and 0.1-0.15m deep. The channel has a typical trapezoidal profile, creating a smooth flow and little physical variation of the margins and banks. In addition, the ditch-bed consists of shallow silts overlying solid material of unknown origin. The channel vegetation was sparse, probably due to dredging work, which has taken place in the recent past. The excavated materials have been dumped on the bank tops on both sides and consist of a large quantity of reed-sweet grass *Glyceria maxima*, which suggests that the ditch contained extensive stands during the summer months. In addition to reed sweet-grass, fool's watercress *Apium nodiflorum*, a starwort *Callitriche* agg. and Nuttall's pondweed *Elodea nuttallii* were also present, occurring in small scattered patches throughout the surveyed section of ditch.

The banks of the ditch have a fairly uniform gradient, which is greater than 45° on both sides for most of the section. The east bank vegetation consists of tall-herb stands, a small patch of common reed *Phragmites australis*, species-poor neutral grassland and to the south, scrub and immature trees are present. The trees and scrub consisted of sycamore *Acer pseudoplatanus*, ash *Fraxinus excelsior* and bramble *Rubus fruticosus* agg. The west bank and bank top supports species-poor neutral grassland, dominated by false oat grass *Arrhenatherum elatius* and cock's-foot *Dactylis glomerata*. In addition, common nettle *Urtica dioica* is frequent on the upper part of the bank and towards the bottom of both banks hairy willowherb *Epilobium hirsutum* creeping

bent-grass *Agrostis stolonifera*, Yorkshire fog *Holcus lanatus*, hard rush *Juncus inflexus* and reed canary grass *Phalaris arundinacea* are also present.

Photograph 2 Typical section of Town's Croft Drain



Target Note 2. Plantation mixed woodland

A field corner on the northern boundary of the site contains mixed plantation woodland, which consists of conifer and broadleaved species including Scot's pine *Pinus sylvestris*, silver birch *Betula pendula* and hawthorn *Crateagus monogyna*, which are currently at the thicket stage of growth creating dense cover and uniform structure.

Target Note 3 Drainage ditch 2

The southern boundary of the plantation mixed woodland consists of a dry ditch connected to the A180 trunk road drainage ditch. The ditch outfall flows into ditch TN1, and is located close to the northern boundary. The ditch has been colonised by tall herbs and neutral grassland, indicating sporadic flows. On the northern bank of the ditch is a relic hedgerow of scattered hawthorn shrubs.

Target Note 4 Defunct hedgerow

The hedgerow is situated on the east side of an access track and runs from south to north. The hedgerow is fragmented into dense, linear stands of hawthorn scrub, isolated hawthorn and elder *Sambucus nigra* shrubs and an isolated mature ash tree. Due to a lack of recent management the shrubs are mature and bushy, growing to a height of 4-6m.

Target Note 5 Defunct hedgerow and dry ditch 1

The ditch supports patches of marginal vegetation and tall-herbs, with species-poor neutral grassland banks. Species include reed sweet-grass, reed canary-grass hairy willowherb and common nettle.

Target Note 6 Defunct hedgerow and dry ditch 2

The hedgerow consists of scattered hawthorn and elder shrubs and an ash tree. In addition a dry drainage ditch is also present, which supports species –poor neutral grassland on the banks and hairy willowherb and hogweed *Heracleum sphondylium* in the ditch bottom.

Target Note 7 Species-poor neutral grassland

A small patch of species-poor neutral grassland is present in the southeast corner of the site next to a Utility installation. The grassland is unmanaged and consists of false oat-grass, cock's-foot, hogweed, creeping thistle *Cirsium arvense* and docks *Rumex* spp. Bramble is colonising from the railway line, situated on the southern boundary.

Target Note 8 Hedgerow and ditch

Species-poor hedgerows are present on either side of a dry drainage ditch. The hedgerows are mature and in places form a dense and continuous canopy, which is up to 6m wide and 5m high; becoming narrower to the south and losing the ditch approximately 150m from the south end of the hedgerow. For the most part, scrub has overgrown the ditch and shaded out the ground flora. The hedgerow is dominated by hawthorn, with frequent bramble, elder and blackthorn. In addition, sycamore and dog rose are also present. Neither hedgerow is intact and where gaps occur between shrubs, the ditch contains tall-herbs and reeds, including reed sweet-grass and hairy willowherb. The ditch banks support tall-herbs such as common nettle and hogweed, where gaps in the shrub cover occur.

Target Note 9 A180 / A1136 Trunk roads boundary

The boundary between the study site and the trunk roads consists of a drainage ditch located at the bottom of embankments of various sizes, from 2 to 30m high. The embankments support a mosaic of habitats primarily false oat-grass dominated, species-poor neutral grassland, immature broadleaved plantation woodland, scattered trees and shrubs and stands of tall herb, such as hairy willowherb. The ditch system is wet in places and supports typical ditch species, such as meadowsweet *Filipendula ulmaria*, greater reedmace *Typha latifolia*, reed sweet-grass, common reed, creeping bent-grass and fool's watercress, which is locally abundant where permanent pools occurred.

Target Note 10 Neutral grassland strip

Towards the northwest corner of the site is a strip of species-poor neutral grassland, approximately 5m wide. The vegetation has grown over a former access track and consists of false oat-grass and cock's-foot dominated grassland with frequent tall herbs such as common nettle. Two trees are present, a coppiced ash, approximately 4m high and a semi-mature pedunculate oak *Quercus robur*.

Target Note 11 Drainage ditch 3

The ditch is steep-sided and approximately 4m deep; during the survey no water was present in the ditch. The channel is less than 1m wide and supports hard rush, hairy willowherb and creeping bent-grass. The ditch banks support species-poor neutral grassland, dominated by false oat-grass and cock's-foot.

Target Note 12 Drainage ditch 4

The ditch is connected to the trunk road drainage ditches (TN9) and is of similar dimensions to drainage ditch 3 (TN11). The south bank vegetation is of a similar composition to drainage ditch

3 banks. However, owing to recent excavation work, the vegetation and the topsoil have been removed. An open sward has developed consisting of red fescue *Festuca rubra*, wild carrot *Daucus carota*, black knapweed *Centaurea nigra* and hoary ragwort *Senecio erucifolius*. The ditch contains small and shallow pools, which support hard rush, greater reedmace, hairy willowherb, creeping bent-grass and tufted hair-grass *Deschampsia cespitosa*.

Target Note 13 Railway Line

The railway line runs on a 2-3m high embankment along the entire length of the south boundary. The habitat on both sides of the railway line is a mosaic of scattered and dense mixed scrub, tall-herb stands, species-poor neutral grassland and bramble under-scrub.

3.1.2 Protected species

Nesting birds The hedgerows, plantation woodland, scattered trees and shrubs, and tall-herb stands provide opportunities for nesting birds. However, during the survey no old nests were observed in the habitats. Species recorded during the site visit include sparrowhawk *Accipiter nisus*, which was observed hunting along drainage ditch 1 (TN1) and a flock of approximately 40, fieldfare *Turdus pilaris* foraging in the open fields and hawthorn shrubs. In addition, wren *Troglodytes troglodytes*, blackbird *Turdus merula*, dunnoek *Prunella modularis*, magpie *Pica pica*, grey heron *Ardea cinerea* and great tit *Parus major* were also observed.

Bats The survey did not locate any evidence of bat roosts on the site, although the timing of the survey is not optimum for finding evidence of activity or presence. The site has few features to support roosting bats except for three trees, which upon inspection showed no evidence or signs of bat activity. The ash tree in defunct hedgerow TN4 has some potential, but the features (loose bark) are too high in the tree for ladder inspection.

Badgers No evidence of badgers *Meles meles* (such as setts, footprints, latrines, diggings) were recorded during the survey of the site and the surrounding areas. The habitats contained within the study site provide limited foraging opportunities and the site is isolated from surrounding land by physical barriers such as roads and railway lines.

Reptiles No evidence of reptiles was recorded during the survey, although the drainage ditches (TN1, 2, 5, 11 and 12) have potential to support foraging grass-snake *Natrix natrix*.

Water Voles A survey of drainage ditch 1 (TN1) was carried out to determine the presence or absence of water vole. In addition, field signs and evidence of water vole activity was recorded. The survey confirmed the presence of water vole burrows, which occupied virtually the entire length of the section of the surveyed ditch. Extensive water vole runs, feeding platforms and bare areas were found in association with the burrows. Feed remains and footprints were found in a few localities and two fresh water vole droppings were found at a single location on the west margin. A water vole survey map has not been included due to the frequency of evidence, which suggests near-continuous occupancy of the ditch margins along the entire section of the ditch.

3.1.3 Other species

In addition to water vole, the banks and ditch margins contained an extensive network of smaller burrows and runs, which suggests the habitat probably contains abundant small mammals, such as bank vole *Clethrionomys glareolus* and common shrew *Sorex araneus*. The location of some smaller burrows close to the water's edge, suggests the possibility that water shrew *Neomys fodiens* could also be present.

Rabbit *Oryctolagus cuniculus* burrows are present along the railway embankment and at the base of an ash tree, situated on the banks of drainage ditch 3 (TN11).

4.0 Assessment

4.1 Constraints on study information

All areas of the site were visited and the features and habitats recorded. The Town's Croft Drain TN1 was shallow with a thin layer of silt overlying a bed of solid material, which allowed the margins to be searched for evidence of water vole, by wading the channel. Although water vole activity is limited during the winter months it is often easier to locate their field signs such as burrows and runs when the vegetation has receded. Although water vole latrines are often absent, feeding remains and fresh footprints are often present, except during very cold weather. Therefore surveying for water vole during winter, to determine presence is not considered a constraint.

December is not the optimum time of year to carry out bat surveys as evidence of their activity may have been washed away or not be readily visible. December is also outside the bird-breeding season and therefore nesting locations could not be identified. Similarly, the time of year was not optimum for reptile surveys. There were no other field constraints at the time of survey.

5.0 Potential impacts

5.1.1 Habitats

The site contains two habitats of ecological value; Town's Croft Drain (TN1) and a hedgerow with ditch (TN8). The site also supports drainage ditches 3 (TN5), 4 (TN11) and 5 (TN12), defunct hedgerows, scattered scrub, strips of species-poor neutral grassland and three mature trees, which are of limited ecological value. The arable fields are considered to be of low ecological value.

The extent to which these habitats will be affected as a consequence of development is not known, but it is likely that a loss, or disturbance of Town's Croft Drain (TN1), drainage ditch 5 (TN12) and hedgerow with ditch (TN8) will have an adverse impact in the local area. The loss of other habitats and features is unlikely to have an adverse ecological impact in the context of the local area.

5.1.2 Protected species

Nesting birds Section 1 of the Wildlife & Countryside Act 1981 prohibits the intentional killing, injuring or taking of any wild bird and the taking, damaging or destroying of the nest (whilst being built or in use) or eggs.

The site provides a range of nesting opportunities for a number of commonly occurring bird species, particularly within the hedgerow and scrub habitats. Any works taking place (within the bird breeding season), which affect these habitats could have an impact on breeding birds, as there is a possibility that nests will be affected. Works to features that support active nests could constitute an offence.

Bats Bats and their roosts are protected under the Wildlife & Countryside Act 1981 (as amended by the CROW Act 2000), and by the Conservation Regulations 1994. In summary, these make it an offence to damage or destroy any bat roost, intentionally or recklessly obstruct a bat roost, deliberately, intentionally or recklessly disturb a bat or intentionally kill, injure or take any bat.

Only one ash tree (TN4) appeared to have features (loose bark), which could support foraging bats. But, an external inspection did not find any evidence of bat activity. Since the survey was carried out outside the optimal time of year it is possible that signs of bat activity, such as bat droppings, could be less obvious (for example washed away following rain). Therefore, it is possible that the ash tree in defunct hedgerow (TN4) could support roosting bats and there is potential to cause offence if the tree is to be removed as part of the proposed development.

Towns Croft Drain (TN1) and the hedgerow with ditch (TN8) are potential foraging habitat for bats and disturbance, or removal of these habitats could have an adverse impact on local foraging opportunities for bats.

Badgers Badgers and their setts receive statutory protection under the Protection of Badgers Act 1992. This makes it an offence to wilfully kill, injure, take, possess or cruelly ill-treat a badger, or to attempt to do so; or 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*".

No evidence of badger activity was recorded during the survey and it is unlikely that badgers visit the site. The habitats provide only limited foraging opportunities for badgers and access for larger animals is restricted due to the site's location, being enclosed by busy roads, urban development and a railway line. However, if there are significant delays prior to development of the site, it is possible that badgers could occupy the site in the meantime.

Water voles Water voles are protected under the Wildlife and Countryside Act (1981), Schedule 9 (4). The Act makes it an offence to damage or destroy or obstruct access to a structure or place which water voles use for shelter or protection; or disturb water voles while they are using such a place.

The level and location of water vole evidence found during the survey suggests that a population occupies virtually the entire section of Town's Croft Drain. If the proposed development is likely to disturb or damage the drain, there is potential to have a negative impact on this species and could also constitute an offence. However, if the drain is isolated from the development, before, during and after the proposed works, there is less potential for an offence to be committed.

Reptiles grass snake are protected under part of Section 9(1) and Section 9(5) of the Wildlife and Countryside Act (as amended) 1981 against intentionally killing and injuring and against sale and transportation for sale.

Although the survey did not find evidence of grass snake, the time of year was not optimal and there is a possibility that grass snake could be present on the site. If present grass snake could be adversely affected by the development and there is potential that such work could constitute an offence. In the unlikely event grass snakes are encountered during development then work should be stopped to allow the animals to escape to suitable habitat within the vicinity.

5.1.3 Other species

The Wild Mammals (Protection) Act 1996 (as amended) makes provision for the protection of wild mammals from certain cruel acts. It makes it an offence for any person to intentionally cause suffering to any wild mammal.

Rabbit burrows were recorded within the site boundary. The development of the site has the potential to destroy rabbit burrows and possibly cause suffering to animals through crushing.

6.0 Recommendations

6.1 Habitats

There are no recommendations for further habitat surveys. However, given the presence of a water vole population, recommendations are provided for habitat retention, creation and management, with the aim of avoiding disturbance of the water vole and promoting the conservation of the population following completion of the proposed development.

The landscape strategy for the proposed development includes the planting of a woodland shelterbelt on the west bank of Town's Croft Drain. It is recommended that the existing hedgerow with ditch (TN8) is retained and extended to the north. The hedgerow would form the east boundary of the proposed shelterbelt woodland and the strip between the hedgerow and the bank top of the drain should be sown with a neutral grassland seed-mix. The proposed shelterbelt woodland should not encroach to the east of the existing and proposed hedgerow as a water-course flanked by woodland or scrub is less suitable habitat for water voles (Strachan, 1998).

Further opportunities for the conservation of the water vole population could be achieved by the creation of a grass strip up to 10m wide alongside the top of the east bank of the drain. The land manager could be compensated for the loss of tillage land by contacting DEFRA and entering the Environmental Stewardship Scheme at entry level.

The shelterbelt woodland should be established using native trees and shrubs, with a strip of thorny shrubs, such as hawthorn, blackthorn and dog rose planted closest to the bank top and grading into native trees, such as pedunculate oak, ash and field maple *Acer campestre*.

There is unlikely to be any negative impact as a consequence of developing the remaining habitats, although the retention of mature trees within the development would be ecologically desirable, providing potential nest sites for birds and roost sites for bats.

6.2 Protected species

Nesting birds If the proposed development is likely to disturb or remove ditches, hedges, scattered trees and shrubs, it is recommended that work is completed outside of the bird nesting season (generally March to August, as a guide). If this is not possible then any works to be undertaken at this time should be subject to a prior check for the presence of breeding birds. If breeding birds are present then any works that could affect the nest would have to be delayed.

Bats If the proposed development is likely to disturb the mature trees, it is recommended that a dawn emergence survey of the mature ash tree in the defunct hedge (TN4) is carried out before the tree is felled or pruned. The survey should be carried out at the time of year when bats are active, preferably during mid-summer. If the tree has to be removed before mid-summer, the tree should be externally surveyed prior to felling during early summer and subsequently felled in sections under the supervision of an experienced ecologist.

Water vole No further survey work is recommended as the presence of water vole in Town's Croft Drain has been confirmed. The proposed development work should be isolated from the drain on the west side by the erection of temporary fencing. The fence should be erected at a minimum distance of 3m from the bank top on the west side of the drain. Following establishment of the shelterbelt plantation and completion of the proposed development, the fence can be removed.

Reptiles The most suitable habitat on the study site is Town's Croft Drain, which will not be affected by the development. Therefore, no further survey work is recommended. In the unlikely

event that grass snakes are encountered during the proposed development then work should be stopped to allow animals to escape to suitable habitat within the vicinity.

6.3 Other species

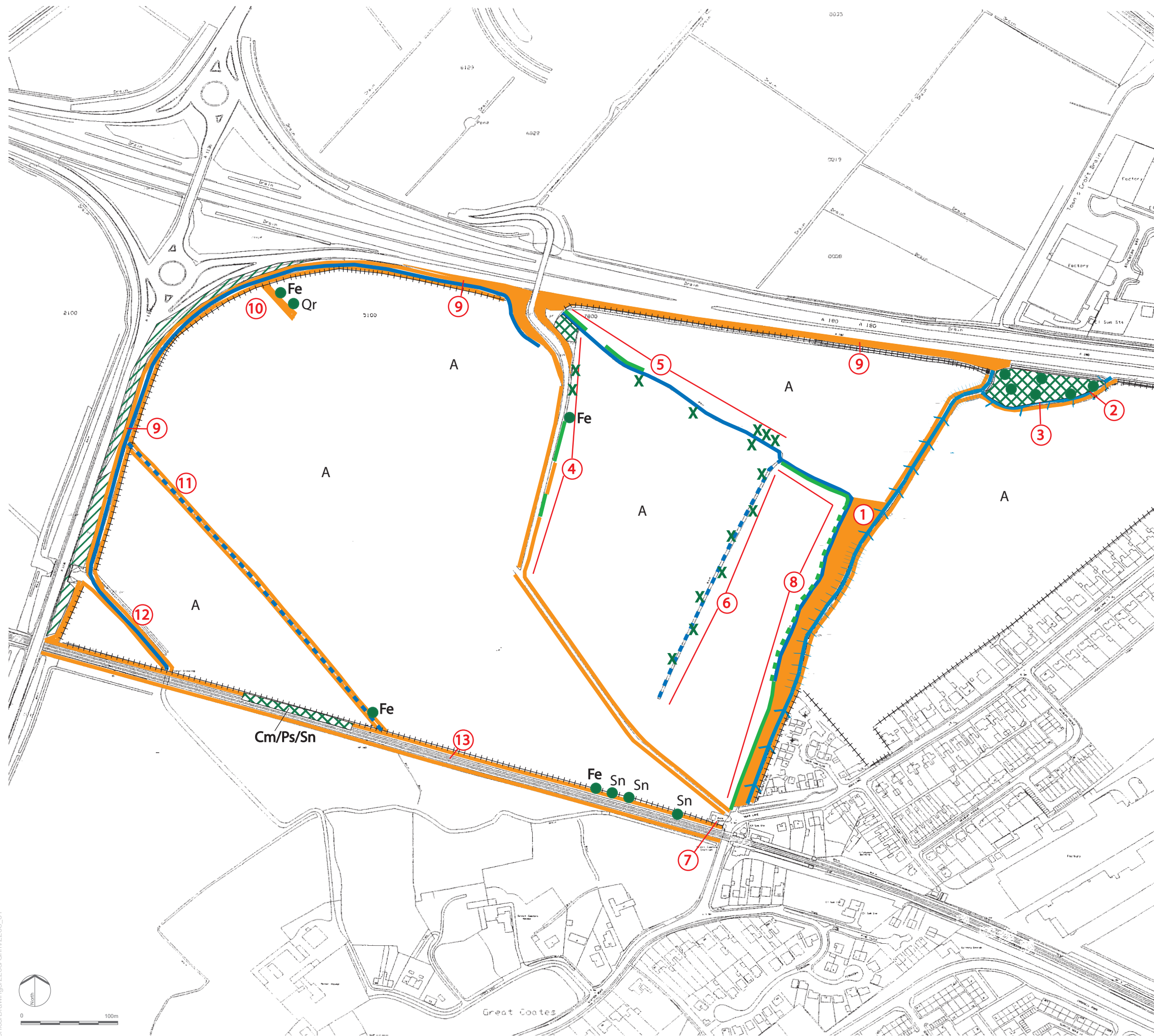
Rabbits It is recommended that the rabbit burrows identified within the site boundary are carefully excavated prior to the start of the works to ensure that the animals are allowed to escape and so an offence is not committed under the Wild Mammals Protection Act 1996.

7.0 Summary

The loss of most of the habitats as a consequence of the proposed development is unlikely to have an adverse ecological impact in the local area. However, Town's Croft Drain (TN1) contains a population of water vole, which should be isolated during development of the study site to avoid habitat disturbance and the risk of causing an offence. Part of the landscape strategy for the proposed development involves the planting of shelterbelt woodland on the west side of Town's Croft Drain; the report provides recommendations for planting and suggests appropriate trees and shrubs to be included in the planting scheme. The report also contains a further recommendation for enhancement of the drain. A positive contribution to the conservation of the water vole population can be achieved by creating a grass strip (2-10m wide) alongside the top of the east bank of the Town's Croft Drain. In addition, the mature ash tree has the potential to support roosting bats and if the proposal involves removal of the tree, further survey work is recommended. It is likely that the proposed development will involve the removal of defunct hedgerows and scattered trees and shrubs, in which case it is recommended that trees and shrubs be removed outside of the bird nesting season.

8.0 References

Strachan, R. 1998. Water Vole Conservation Handbook. Wildlife Conservation Research Unit, Oxford.



Legend

- X Scattered scrub
- Scattered trees
- Shallow ditch, dry during survey
- Defunct hedge, species-poor
- 3 Target note
- Sn Sambucus nigra
- Fe Fraxinus excelsior
- Qr Quercus robur
- A Arable land
- Fence
- Intact hedge, species-poor
- Standing water
- Running water
- Unimproved neutral grassland, species-poor
- Dense scrub
- Plantation broadleaved woodland
- Cm Crataegus monogyna
- Ps Prunus spinosa

Rev.	Description	App.	Date
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LANDSCAPE
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LAND AT JUNCTION A1136 AND A180(T), GRIMSBY

Phase 1 Habitat Plan

Date:	Dec. 05	Drawn:	DB
Scale:	N.T.S	Checked:	MW
Status:	Planning	Approved:	CHC

Dwg. No: 2208LP/05

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