

Great Yarmouth Third River Crossing

Application for Development Consent Order

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Preliminary Ecological Appraisal

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1 Introduction

1.1 Background

Mouchel was commissioned by the Applicant to undertake a Preliminary Ecological Appraisal (PEA) of land at the proposed site of the Great Yarmouth Third River Crossing, hereafter referred to as the 'Site' shown in Figure 8B.1. The Site has been identified by the Applicant as the site of a future link to cross the River Yare.

This report presents the results of the PEA undertaken in September 2016. This report identifies ecological constraints located up to 2 km from the Site and makes recommendations for further survey work and/or avoidance or mitigation measures as appropriate.

1.2 Site Location

The amends the existing William Adams Way so that the crossing ties in directly with the A12, in the centre of Great Yarmouth, to the west of the river. On the west of the river, there are several residential properties as well as parkland and allotments. The crossing meets South Denes Road (the A1243) on the east of the river, with the land here being used by several industrial complexes.

1.3 Study Objectives

An area, extending up to 2 km from the was surveyed in order to determine impacts and likely constraints to the Site. The study set out to:

- Consult records of statutory protected sites within 2 km of the Site;
- Identify habitats and species present or likely to be present that are ecologically important and/or have legal protection; and
- Identify invasive species that might be present on Site.

2 Methods

2.1 Desk Study

The Norfolk Biodiversity Information Service (NBIS) was consulted to gather information on records of species and nature conservation designations from within the survey area.

A review of the Multi-Agency Geographic Information for the Countryside¹ online resource was also undertaken to gather information on statutory nature conservation designations within the survey area.

2.2 Field Survey

A walkover survey, undertaken broadly in accordance with Phase 1 habitat survey methodology², was carried out on 28th and 29th September 2016. Habitat types were identified and mapped, with target notes made to identify features of interest. The suitability of habitats within the site to support legally protected, valuable or controlled species was assessed with incidental field signs or sightings of species recorded as seen.

2.3 Limitations

Survey work was undertaken at the end of the accepted optimal season for carrying out botanical surveys, generally accepted to be April to September (inclusive). However, it is considered that sufficient information was gathered to enable an assessment of the habitat types present, in line with standard Phase 1 habitat categories and the potential for these to support protected or notable species.

¹ *Multi-Agency Geographic Information for the Countryside (MAGIC) (2016) Home [Online]. Available at www.magic.gov.uk [accessed 18 March 2016].*

² *Joint Nature Conservation Committee (JNCC) (2010). Handbook for Phase 1 Habitat Survey – A Technique for Environmental Audit. Peterborough, UK*

3 Results

3.1 Desk Study Results

3.1.1 Statutory Designated Sites

The Outer Thames Estuary Special Protection Area (SPA) is within 2km of the Site. This site is designated because it supports 38% of the Great British population of redthroated diver *Gavia stellate*, which is listed on Annex 1 of the EU Birds Directive.

3.1.2 Non-Statutory Designated Sites

There are no non-statutory designated sites within 2km of the Site.

3.1.3 Invertebrates

The information returned from the desk study contained a record of the goat moth *Cossus cossus*, which is a UK Biodiversity Action Priority (BAP) species.

3.1.4 Amphibians

One record of natterjack toad *Epidalea calamita* was returned. This record was for Gorleston on Sea and is undated.

There are three records for common toad *Bufo bufo*, the most recent being dated March 1999. These records are for Southtown Common, approximately 800m west of the Site.

3.1.5 Reptiles

There are four records for common lizard *Zootoca vivipara*, the most recent from Southtown Common in June 2008.

There are two records for slow-worm *Anguis fragilis*, the most recent of which was from grid reference TG52530771 in August 2008.

3.1.6 Mammals

There are fourteen records of water vole *Arvicola amphibius* from within 2km of the Site, the most recent being from December 2012.

There are three records of otter *Lutra lutra* within 2km of the Site, the most recent for a site by the name of Coopers in October 2011.

There are multiple records of bat species within 2km of the Site, many of which are from within the footprint of the Site. The most recent of these are described in the table below.

Species	Number of Records	Most Recent Record
Common pipistrelle, <i>Pipistrellus pipistrellus</i>	5	June 2015
Soprano pipistrelle, <i>Pipistrellus pygmaeus</i>	1	May 2015
Nathusius' pipistrelle, <i>Pipistrellus nathusii</i>	2	May 2015
Serotine, <i>Eptesicus serotinus</i>	1	May 2015
Daubenton's bat, <i>Myotis daubentonii</i>	1	May 2015
Noctule, <i>Nyctalus noctula</i>	3	May 2015
Brown long-eared bat, <i>Plecotus auritus</i>	1	May 2015

There are eight records of hedgehog *Erinaceus europaeus*, the most recent being from September 2009. Brown hare *Lepus europaeus*, has been also been recorded within 2km of the Site, in August 2013.

There is one record of [REDACTED] *Meles meles* within 2km of the Site, dating from September 2014.

3.1.7 Birds

A large number of bird species have been recorded within 2km of the Site. These include 50 species included on Schedule 1 Part 1 of the Wildlife and Countryside Act 1981 (as amended) which are protected at all times of the year.

3.2 Field Survey Assessments

3.2.1 Habitat Assessments

A plan showing the habitats identified within the Site is shown in Figure 8B.1.

3.2.1.1 William Adams Way and Suffolk Road

Southtown Common recreation ground lies to the south of William Adams Way. This area contains amenity grassland dominated by perennial rye-grass *Lolium perenne*, with some white clover *Trifolium repens*, ribwort plantain *Plantago lanceolata* and common dandelion *Taraxacum officinale* also present.

To the north and west, the common is bordered by a ditch containing standing water. The banks are covered by common nettle *Urtica dioica*, bramble *Rubus fruticosus*, great willowherb *Epilobium hirsutum*, dog rose *Rosa canina* and creeping thistle *Cirsium arvense*.

A mixture of broadleaf trees are present in the margins of the common, as well as bordering William Adams Way to the north and south. Pedunculate oak *Quercus robur*, beech *Fagus sylvatica*, poplar *Populus* spp., willow *Salix* spp., hawthorn *Crataegus*

monogyna, sweet chestnut *Castanea sativa* and horse chestnut *Aesculus hippocastanum* are all present alongside ash *Fraxinus excelsior* and elder *Sambucus nigra*.

To the north of William Adams Way and to the west of Suffolk road, is an area of wet scrub. The ditch passes under William Adams Way and runs north away from the road. The area around the ditch contains willow, great willowherb, bramble, common nettle, hawthorn, poplar and field bindweed *Convolvulus arvensis* and hogweed *Heracleum sphondylium*.

The area to the east of Suffolk Road contains several allotments which, in addition to the native species already listed, contained varieties of arable crops and introduced garden plants.

The trees and scrub in this area are suitable for use by nesting birds. Overall, the habitats around William Adams Way and Suffolk Road are of low ecological value.

3.2.1.2 South Denes Road

The area to the east of the river Yare is well built up with roads, industrial buildings and concrete storage space for materials being shipped. Butterfly bush *Buddleja davidii*, creeping thistle and ragwort *Jacobaea vulgaris* were seen to be growing amongst the concrete.

The hedgerows and trees surrounding the site are suitable for nesting birds (an active woodpigeon nest was seen during the survey). Overall, the hedgerows are of low ecological value.

There are many old buildings in states of disrepair to the east of the river. These buildings may provide roosting sites for bats.

3.2.2 Species Assessments

3.2.2.1 Amphibians

There are areas of terrestrial habitat within 250m of the that are suitable for use by amphibians. This includes the land on the northern and western edge of Southtown Common, which also includes a ditch with standing water. The ditch passes under William Adams Way and runs north beneath Queen Anne's Road before running north-west. As the ditches are linked underneath the two roads, they are considered here as one water body.

There is a small pond at TG523058. This and the surrounding habitat of grassland, scrub and woodland is suitable for use by amphibians.

3.2.2.2 Reptiles

The majority of the site is made up of either short and open sward or hard open concrete urban areas and is of negligible value for reptiles. The allotments south of Queen Anne's Road at TG523058 provide habitat suitable for use by reptiles including

a mix of tall ruderal vegetation and rough sward amongst areas of compost and logs that could be used as refugia.

3.2.2.3 Mammals

There are several structures within 100m of the Site that may be suitable for use by roosting bats. There are two uninhabited and poorly maintained houses at TG524058 as well as old brick buildings at TG524057 on the west side of the river Yare.

On the east side a disused pub at TG525060, a smokery at TG52606 and empty, damaged buildings at TG526059 offer further possible roosting sites for bats.

The drainage ditches associated with the A12 provide suitable habitat for water vole.

3.2.2.4 Birds

Bird species recorded within the site during the survey include wood pigeon *Columba palumbus*, magpie *Pica pica*, carrion crow *Corvus corone*, house sparrow *Passer domesticus*, blue tit *Cyanistes caeruleus* and robin *Erithacus rubecula*.

Trees and areas of scrub within and adjacent to the Site are suitable for use by nesting birds. Old brick buildings where access is possible through broken windows and other gaps provide suitable nesting sites for pigeons.

The mosaic of urban areas with scattered ruderal vegetation provides some suitable habitat for black redstart *Phoenicurus ochruros*.

4 Evaluation & Recommendations

4.1 Statutory Designated and Non-Statutory Protected Sites

The Outer Thames Estuary SPA is within 2km of the Site. Screening for Habitats Regulations Assessment is strongly recommended.

4.2 Habitats

The site is largely comprised of urban areas, with areas of improved grassland, scattered trees, scrub and standing water. These habitats are of low biodiversity value.

4.3 Species

4.3.1 *Amphibians and Reptiles*

Overall, amphibians and reptiles are unlikely to be present. Although small areas of habitat that is suitable to provide foraging, shelter and hibernation areas exist, the site is located within a predominantly urban environment and is not connected to areas of suitable offsite habitat. Accordingly, no further work in respect of amphibians and reptiles is recommended.

Both water bodies were assessed using the Habitat Suitability Index (HSI) to estimate their suitability for supporting breeding great crested newts *Triturus cristatus* (Table 8B.1). The scores of 0.49 (ditches) and 0.52 (pond) indicate that great crested newts are unlikely to use these ponds and further surveys are therefore not recommended.

4.3.2 *Birds*

Black redstart is listed on Schedule 1 of the Wildlife and Countryside Act 1981 (as amended). This species is recorded as breeding within Norfolk and Suffolk and further surveys are recommended to determine the presence of this species with regards to the location of the proposed works.

Areas of scrub and woodland which are present are suitable for use by breeding birds. No further surveys are recommended, however, in order to minimise the risk of disturbing breeding birds, the removal of woody vegetation should ideally be undertaken outside of the breeding season (typical breeding bird season is March to July inclusive). If tree and vegetation removal has to take place during this period, the vegetation should be checked prior to removal for the presence of nests by an appropriately experienced ecologist. If nests that are in use are present, it may be necessary to delay work in immediate proximity to the nest until the young have fledged.

4.3.3 *Mammals*

The buildings within the site are either to be purchased for demolition or will be subject to disturbance during the construction phase. It is recommended that further surveys are undertaken to confirm the presence or absence of bats within these buildings.

The wider area supports water voles *Arvicola amphibius* and the ditches associated with the A12 are suitable to support this species. Further surveys are therefore recommended.

The habitats within the site, and the surrounding residential gardens, are suitable to support hedgehogs *Erinaceus europaeus*. It is recommended that a watching brief is maintained during the works to protect individual hedgehogs that may be present.

5 Figures

Figure 8B.1 – Habitat Map