APPENDIX 12.1 – PHASE 1 TARGET NOTES

TN1 – Japanese Knotweed.

TN2 – Badger dung, not in pit.

TN3 – Large holes in bund potentially attributable to Badger.

TN4 – Three disused entrance holes, potentially attributable to Badger.

APPENDIX 12.2 – SUMMARY OF IMPACTS

Table 12.8 Summary of Construction Phase Potential Impacts							
Feature	***Confidence in Impact prediction***	***Extent and Magnitude***	***Duration***	***Reversibility***	***Timing & Frequency***	***Cumulative Assessment***	***Summary***
Arable Land	High	The proposed development would result in the loss of a large amount of this habitat.	Long-term	Permanent	Loss during summer months has highest impact	Loss of arable fields are not a major issue in the local area; however, cereal field margins are listed in the local BAP as a result of their decline in recent years.	Loss of large amounts of impoverished arable fields of low ecological value. Loss of strips of cereal field margin of local value.
Woodland and tree belts	Moderate	The proposed development will result in the loss of a small area of mixed plantation woodland. The dust caused by construction result in the deterioration in some of the perimeter habitat	Long term Short-term	Permanent Reversible: Habitat is likely to recover	Loss during summer months has highest impact	Lowland deciduous woodland is also listed in the local BAP as a result of its decline .	Loss of small areas of woodland Possible deterioration of a district value habitat due to dust from construction

Table 12.8 Summary of Construction Phase Potential Impacts							
Feature	***Confidence in Impact prediction***	***Extent and Magnitude***	***Duration***	***Reversibility***	***Timing & Frequency***	***Cumulative Assessment***	***Summary***
Scrub and rough grassland	High	Loss of approximately significant area of this habitat	Long-term	Permanent	Loss during summer months has highest impact	Not listed in the local BAP and the habitat is considered to be stable in the county	Permanent loss of small areas of local value habitat
Species-poor hedge	High	Small proportion of habitat (4.5m), habitat connectivity generally not affected. Loss of small sections due to potential widening of existing gateways	Long-term	Permanent	Loss at any time has significant impacts on other species	Not a major issue within the local area – agri-environment schemes have increased habitat across UK	Loss of small sections of county important habitat to be lost.
Set-aside	High	Small set-aside field	Long term	Permanent	Loss during summer months has highest impact	Setaside field is generally an ephemeral habitat and this field is likely to be planted with crops before development commences	Permanent loss of a setaside field of local ecological value.

Table 12.8 Summary of Construction Phase Potential Impacts							
Feature	***Confidence in Impact prediction***	***Extent and Magnitude***	***Duration***	***Reversibility***	***Timing & Frequency***	***Cumulative Assessment***	***Summary***
Gravel pit	High	Conversion of an area of gravel pit into two football pitches	Long-term	Easily replicated habitat - Reversible	Loss during summer months has highest impact	This habitat relies on the continuation of the gravel pit and is likely to disappear in the long term	Loss of an area of gravel pit in the centre of the site. Ponds to be retained
Water bodies	Moderate	Disturbance to land around the ponds in the centre of the site may cause a decrease in water flow in this area. This could lead to changes to aquatic vegetation around the site.	Short term	Reversible	Deterioration in the spring and summer would have the greatest impact	Unlikely to be a major issue in the locality.	Potential indirect impact on waterbodies in the centre of the site

Table 12.8 Summary of Construction Phase Potential Impacts							
Feature	***Confidence in Impact prediction***	***Extent and Magnitude***	***Duration***	***Reversibility***	***Timing & Frequency***	***Cumulative Assessment***	***Summary***
Adjacent habitats	Moderate	The dust caused by construction could be blown up to 100m from the site resulting in the deterioration in quality of some of the perimeter habitat, particularly the	Short term	Reversible	Works during the summer would have highest impact		Possible short term deterioration to habitats immediately adjacent the site
Badger	Moderate	Limited impacts could occur throughout the development area.	Short term	Reversible	Impacts may occur throughout the year.	Unlikely to be a major issue in the locality.	Possible impacts on local badger populations if straying near to development area.
Bats	Moderate	Potential loss of bat foraging habitat, commuting habitat and tree roosts.	Long term	Reversible	Impacts may occur throughout the year.	Potential moderate issue in the locality.	Potential impacts if habitat lost.

Table 12.8 Summary of Construction Phase Potential Impacts							
Feature	***Confidence in Impact prediction***	***Extent and Magnitude***	***Duration***	***Reversibility***	***Timing & Frequency***	***Cumulative Assessment***	***Summary***
Breeding birds	High	Loss of areas of nesting/foraging habitat, grassland and woodland	Long term	Permanent	Loss during breeding season would be most damaging	Decline in field margins and hedges over the years have led to many arable bird species becoming national and local BAP	Loss of nesting and foraging habitat
Wintering birds	High	Loss of areas of foraging habitat, grassland, arable and woodland habitat	Long term	Permanent	Loss during winter would be most damaging	Decline in field margins and hedges over the years have led to many arable bird species becoming national and local BAP	Loss of foraging habitat
Reptiles	High	Loss of hedgerows heathland and areas of scrub may lead to small risk of killing and injuring during construction and loss of habitat.	Long term	Reversible	Loss of habitat during winter would be most damaging	Potential moderate issue in the locality.	Loss of reptile habitat may lead to killing and injury of reptiles and isolation of individuals.

Table 12.9 Summary of Operational Phase Potential Impacts							
Feature	***Confidence in Impact prediction***	***Extent and Magnitude***	***Duration***	***Reversibility***	***Timing & Frequency***	***Cumulative Assessment***	***Summary***
Deben Estuary SPA, Ramsar, SSSI	High	No adverse impact anticipated. As the site is 2km from the Deben Estuary, no operational phase impacts are anticipated for the Deben Estuary (see report by Environ UK Ltd 2008 for further details)					
Remaining post development habitats within and adjacent the proposed development	Moderate	Deterioration of habitats due to increased recreational disturbance from human activity and a slight deterioration in habitat quality due to increased emissions and run off.	Long term	Reversible: if human activity stops	Damage during the summer would have highest impact.		Long term deterioration to habitats adjacent the proposed development from human activity and pollutant run off
Badger	Moderate	Loss of badger foraging habitat.	Long term	Reversible: if site restored to former state	Badgers are likely to avoid developed area due to human activity, therefore frequency would be low.	Impact should be limited provided land surrounding the site is not heavily developed in the future.	Impacts are likely to be limited as similar foraging habitat exists outside of the development area.

Bats	Moderate	Disturbance to foraging bats from lighting.	Long term	Reversible with mitigation.	When bats are active in the summer months they may be impacted by lighting.		Bats could be adversely affected by lighting.
Breeding birds	High	Disturbance from dogs and human activity. Killing and injuring from the increase in cat numbers	Long term	Reversible in the long-term if humans, dogs and cats are removed from site.	Disturbance, killing and injuring during breeding season would be most damaging	Impact is increased when considered alongside the increasing disturbance associated with pets and human activity in the county.	Increased disturbance, killing and injuring due to human activity, dogs and cats.
Wintering birds	High	Disturbance from Dogs and human activity. Killing and injuring from the increase in cat numbers	Long term	Reversible in the long-term if humans, dogs and cats are removed from site.	Disturbance, killing and injuring during winter would be most damaging	Impact is increased when considered alongside the increasing disturbance associated with pets and human activity in the county.	Increased disturbance, killing and injuring due to human activity, dogs and cats.
Reptiles	Moderate	Impacts are likely to include killing and injuring due to increased predation from cats.	Long term	Reversible in the long-term if humans, dogs and cats are removed from site.	Disturbance, killing and injuring during winter would be most damaging		

Table 12.10 Summary of Pre-Mitigation Significance of Impacts				
Receptor	***Value***	***Impact***	***Significance***	***Rationale***
Arable	Local	Construction -Habitat loss	Local negative	Major loss of this habitat including field margins
		Operational	Immediate zone of influence	No significant impact foreseen
Buildings and associated infrastructure	Immediate zone of influence	Construction - Habitat loss	Immediate zone of influence	Loss of common habitat
		Operational	Immediate zone of influence	Construction of buildings on site
Gravel Pit	District	Construction	Local negative	Degradation of ponds due to run off Loss of areas of sandy habitat (results of invertebrate survey are needed before the impacts on this area can be fully assessed)
		Operation	Lo	
Woodland and tree belts	District	Construction phase - Habitat loss	Local to District negative	Loss of 0.7 ha of district value – survey of woodland would be needed to determine value of habitat in this area.
		Operational phase	Local negative	Disturbance and damage of habitat due to human activity, and increased emissions from vehicles and other equipment

Scrub and rough grassland	Site to local value	Construction phase - Habitat loss	Local negative	Loss of habitat of local value
		Operational phase	Immediate zone of influence negative	Disturbance and damage of habitat due to human activity, and increased emissions from vehicles and other equipment
Set-aside	Local	Construction phase	Local negative	Loss of habitat
		Operational phase	Immediate zone of influence negative	Habitat would be removed during construction no further impacts are possible
Species poor hedge	Local	Construction phase	Local	Loss of habitat
		Operational phase	Immediate zone of influence	Disturbance and damage of habitat due to human activity, and increased emissions from vehicles and other equipment
Waterbodies	Local to district value	Construction phase	Local negative	Filling in two ornamental ponds and potential ground water run off into waterbodies in the centre of the site
		Operational phase	Immediate zone of influence, negative	Increased run off due to emissions from vehicles and other equipment. Increased disturbance form human activity
Bats	Local	Construction phase – risk of killing or injury during tree removal. Loss of foraging habitat.	Local negative.	Loss of foraging habitat from habitat removal, potential disturbance to bats roosting in mature trees
		Operational phase – lighting may adversely affect certain species of bat.	Immediate zone of influence, negative	Impacts of lighting on bats may deter bats from habitual foraging grounds

Breeding Birds	Local	Construction phase – Habitat loss	Local negative	Loss of breeding habitat well represented in the locality
		Operational phase – predation and disturbance.	Local negative	Killing by cats. Disturbance from human activity and dogs
Wintering Birds	Local	Construction phase – Habitat loss	Immediate zone of influence negative	Loss of habitat well represented in the locality
		Operational phase – predation and disturbance.	Local negative	Killing by cats. Disturbance from human activity and dogs
Badgers	Local	Construction phase – loss of foraging habitat, risk of construction site accidents.	Immediate zone of influence, negative	Parts of the site are used by foraging badgers, these areas will become inaccessible to badgers. Badgers can become trapped in open foundations and pits in the development site.
		Operational phase - Disturbance from humans and pets	Local negative	An increase in pets and humans could lead to disturbance to badgers using the site and surrounding area.
Reptiles	Local	Construction phase – risk of killing and injury during habitat removal, loss of habitat.	Local negative	The clearance of areas of scrub, hedgerow, rough grassland and road verges may cause injury and death to reptiles.
		Operational phase - Disturbance from humans and pets	Immediate zone of influence negative	An increase in pets and humans could lead to disturbance to reptiles using the site and surrounding area.

APPENDIX 12.3 – APPROPRIATE ASSESSMENT (AA) SCREENING RESPONSE

Adastral Park
Appropriate Assessment
Screening Report

Prepared for:

BT c/o Telereal Ltd

Prepared by:
ENVIRON
Exeter, UK

Date:
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68-C12927

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Date:	16 July 2008

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Contents

1 Introduction

1.1 Background to the Report

This report presents the results of the Screening Stage of the Appropriate Assessment (AA) undertaken for the proposed development at Adastral Park, Martlesham Heath, near Ipswich, Suffolk (national grid reference TM 254 446). It assesses whether these proposals would give rise to significant adverse impacts on the conservation objectives of European Sites, in particular Deben Estuary Special Protection Area (SPA). Deben Estuary SPA is located at national grid reference TL 237 708 (Figure 1.1) which, at its closest point, lies approximately 1.5 km to the east of the site boundary.

The Screening Study is designed to establish the existing environmental value of the site and surrounding area in order to identify those elements of the proposals which may potentially give rise to significant adverse impacts. If, following screening, significant adverse impacts were anticipated, a full AA would consider potential impacts in more detail and determine whether alternative measures could be adopted. If there are no viable alternatives, developments can only be implemented if there are 'imperative reasons of overriding public interest'.

The Screening Study has involved the acquisition and review of baseline environmental data from a wide range of sources. Further details of these sources are provided in the relevant sections of this report. The report follows guidance provided in the Department for Communities and Local Government (DCLG) "Planning for the Protection of European Sites: Appropriate Assessment."

The following sections of this report provide a more detailed description of the existing site in Section 2 and the proposed development in Section 3. Potential impacts on the Deben Estuary SPA are provided in Section 4. This report is intended to provide Natural England with the information required to determine whether further stages of Appropriate Assessment are required for the development proposals.

1.2 Approach to the Screening Process

The purpose of AA is to ensure that significant effects on European sites are avoided. The assessment is carried out in respect of the 'conservation objectives' for which a European site has been designated and its integrity in relation to its ability to support those objectives. The full AA process is illustrated in Appendix A of this report.

The purpose of Screening is to determine whether significant adverse impacts are likely on any European sites (in this case just the Deben Estuary SPA) and therefore to determine whether further stages of AA would be required. This is achieved by considering the conservation objectives for which the site is designated and assessing any potential impacts against these objectives.

It is important to consider the possibility of impacts on any European site, whatever its location, given the likely activities included in the proposals and their range of influence, which may extend some distance from the area within the immediate influence of a plan. Sites which could possibly be affected were identified and information obtained about designated interest features and associated conservation objectives, largely using the Joint Nature Conservation Committee (JNCC) website to identify any activities or aspects which might affect interest features or the ability to achieve favourable condition. Other plans and projects which might contribute to in-combination effects were also identified.

However, according to DCLG guidance, the comprehensiveness of any assessment work should be proportionate to the geographical scope of the option and the nature and extent of any effects identified. The assessment should be confined to the effects on the internationally important habitats and species for which the site is classified. An AA need not be done in any more detail, or using more resources, than is useful for its purpose. It would be inappropriate and impracticable to assess the effects in the degree of detail that would normally be required for the Environmental Impact Assessment (EIA) of a project.

The Screening Study was based on the following information resources:

- information from Natural England on sites designated for their nature conservation value;
- MAGIC (Multi-Agency Geographic Information for the Countryside) website for designations;
- Joint Nature Conservation Committee (JNCC) for designations; and
- information provided by members of Telereal's consultancy team.

1.3 Background Information: East of England Habitats Directive Assessment

A report was published by Fulton (2006), which presented the process and the outcomes of the Habitats Directive Assessment of the Regional Spatial Strategy (RSS) for the East of England. This report considered the impact of proposed development around Ipswich, which encompassed Adastral Park.

The conclusion of this assessment was that implementation of the policies within the East of England RSS would not result in any likely significant effects on Natura 2000 or Ramsar sites, either individually or in-combination.

2 Site Description

2.1 Adastral Park

The proposed development site at Adastral Park[1] lies immediately to the south-east of Martlesham Heath and occupies approximately 161 ha of land. It is dominated by the main British Telecom (BT) building, situated in the north-west corner of the site. The majority of the land is arable and fairly continuous with the surrounding landscape. Part of the land to the south is a working quarry used for gravel extraction. The site supports scattered woodland and tree belts, mainly around the perimeter. Numerous buildings make up most of the north-west of the site, forming Adastral Park, one of which is the BT building. The Science Park has a working population of over 4,000 people. Associated facilities include large areas of car parking, amenity grassland and ornamental shrubs and trees.

At its closest point the Deben Estuary lies approximately 1.5 km to the south of the site.

2.2 European Sites

The Natura 2000 network provides ecological infrastructure for the protection of sites which are of exceptional importance in respect of rare, endangered or vulnerable natural habitats and species within the European Community. Also referred to as European Sites, Natura 2000 sites consist of Special Protection Areas (SPAs) and Special Areas of Conservation (SACs). Planning Policy Statement 9 Biodiversity and Geological Conservation (PPS9) (ODPM, 2005) advises that proposed sites awaiting approval, potential SPAs (pSPAs) and candidate SACs (cSACs), should be treated in the same way as those already classified and approved.

[1] To avoid confusion, this report refers to the Adastral Park as the 'site' and the Deben Estuary SPA as the 'SPA'.

PPS9 also recommends that Ramsar sites should be afforded the same level of consideration as SPAs and SACs, in policy if not in law. All SPAs, SACs and Ramsar sites overlap to some degree with Sites of Special Scientific Interest (SSSIs). AA relates specifically and exclusively to the qualifying interests of European sites and not to the broader conservation interests or requirements under other SSSIs.

The European Union Habitats Directive on the conservation of natural habitats and of wild fauna and flora (Council Directive 92/43/EEC) and Birds Directive on the conservation of wild birds (Council Directive 79/409/EEC) place obligations on the UK to take certain actions for nature conservation. The Habitats Directive aims to maintain biodiversity and details measures to maintain or restore natural habitats and species at favourable conservation status. The Birds Directive protects all wild birds and their habitats and details special measures for migratory species and those that are considered to be vulnerable and/or rare.

Schedule 1 of the *Conservation (Natural Habitats, &c) (Amendment) (England and Wales) Regulations* 2006 inserts a new Part IVA into the Conservation (Habitats, &c) Regulations 1994 and transposes into English Law the requirement to carry out Appropriate Assessment for land use plans. Article 85B of the *Conservation (Natural Habitats, &c) (Amendment) Regulations* 2006 sets out that *"the plan-making authority for that plan shall, before the plan is given effect, make an appropriate assessment for the implications for the site in view of that site's conservation objectives".*

According to the MAGIC website the following three Natura 2000 sites are located within 10 km of the site:

Table 1.1: Natura 2000 sites within 10 km of the proposed development

Natura 2000 site	**Distance from Adastral Park (approx)**	**Reasons for Designation**
Deben Estuary SPA	1.5 km	Overwintering populations of Avocet *Recurvirostra avosetta*, 95 individuals representing at least 7.5% of the wintering population in Great Britain.
Sandlings SPA	5 km	Nightjar *Caprimulgus europaeus*, 109 pairs representing at least 3.2% of the breeding population in Great Britain (Count as at 1992)

Natura 2000 site	Distance from Adastral Park (approx)	Reasons for Designation
		Woodlark *Lullula arborea*, 154 pairs representing at least 10.3% of the breeding population in Great Britain (Count as at 1997)
Stour and Orwell estuaries SPA	5.75 km	A wetland of international importance for its over wintering and migratory birds

Due to its proximity to the site, the Deben Estuary is the only site which is considered during this screening report. The Deben Estuary is located on the coast of Suffolk in eastern England. It extends south-eastwards for over 12 km from the town of Woodbridge to the sea just north of Felixstowe. It is relatively narrow and sheltered and has limited amounts of freshwater input. The estuary mouth is the narrowest section and is protected by the presence of shifting sandbanks. The intertidal areas are constrained by sea walls. However, the saltmarsh and intertidal mud-flats that occupy most of the site ,display the most complete range of saltmarsh community types in Suffolk. The estuary holds a range of swamp communities that fringe the estuary and occasionally form larger stands. In general, these are dominated by Common Reed *Phragmites australis*.

The JNCC website (www.jncc.gov.uk/default.aspx?page=2023) states that the site qualifies as an SPA by supporting an over wintering population of Avocet *Recurvirostra* avosetta. This species is listed on Annex I of the *Birds Directive.* The site supports 95 individuals[2], which represents at least 7.5% of the wintering population in Great Britain. The integrity of the site is dependent on the following conservation objectives:

- To maintain, in favourable condition, the habitats for the populations of *Annex 1* species of European importance, with particular reference to:

  (i) Intertidal mudflat communities; and
  (ii) Saltmarsh communities.

3 The Proposed Development

3.1 Description

[2] 5 year peak mean 1991/2 – 1995/6

The planning application is likely to comprise the redevelopment of Adastral Park and development of adjoining land to provide the following:

- around 60,000 m^2 of new B1 employment floorspace, related car parking spaces and landscaping;
- around 2,000 homes;
- a mixed use local centre to serve the whole community: employment, and existing and proposed residential areas;
- land for a two form entry primary school;
- a hotel;
- an energy centre and other utility infrastructure;
- accommodation for an expanded education presence, space for more university activity and other similar educational institutions;
- a public park and other areas of public open space, including formal open space provision for sport, recreation and play;
- supporting services and facilities;
- a network of landscape designed boulevards and streets to provide access and utility services for the development;
- full provision for the operation of public transport through the development, primarily on the boulevards and main streets;
- new road connections to Newbourne Road and to the Foxhall / Brightwell roundabout junction on the A12;
- landscape areas and visual buffers around the perimeter of the land; and
- ground remodelling following minerals extraction (subject to separate minerals planning application).

3.2 Other Developments

At the time of writing, no further developments were known within 1 km of Adastral Park.

4.0 Baseline Environmental Conditions & Assessment of Impacts

4.1 Air Pollution

In relation to the site, air pollution can take the form of deposition of particles, ammonia, metals and salt from vehicle emissions and construction dust emissions. Construction and operation of the proposed development would result in the dust from ground disturbance as well as emissions from traffic. Air pollution associated with the proposed development is unlikely to impact the SPA as emissions will fall out less than 200 m from source and, therefore, a **negligible impact** on the SPA is anticipated.

4.2 Water Pollution

A number of surface water bodies are present on site including: mineral extraction ponds, two amenity ponds, a fishing pond and one soakaway pond. The closest watercourse to the site is a drain, which lies approximately 300 m to the north of the site and flows in an easterly direction, before joining the River Deben approximately 4 km to the east.

The nearest main river is recorded as Bucklesham Mill River, approximately 937 m to the south of the site. Bucklesham Mill River flows in an easterly direction for approximately 6 km before flowing into the River Deben (Figure 1.1).

The EA has developed a River Ecosystem (RE) classification system which is used to develop River Quality Objectives (RQOs) to help improve the water quality of rivers in England and Wales. Each section of river is given an RE class which is used to create the RQO for a particular stretch of river. The classifications range from RE1 - very good quality (suitable for all fish species) to RE5 - poor quality (likely to limit fish species).

The results of the closest EA monitoring point on the river, where samples are taken and evaluated under the EA's GQA scheme, are presented in Table 4.1.

Table 4.1: Chemical and Biological Quality of Bucklesham Mill River

Water Quality Variable	Bucklesham Mill River
Chemical Quality	2006 – B (good)
Biological Quality	2004 – B (good)
River Quality Targets	1994-2006 – Target 1 Significant Failure / Marginal Failure

According to Landmark Envirocheck there was one recorded Category 3 - minor pollution incident which occurred on site in 1994 and was attributed to oils. There have been a further three Category 3 pollution incidents within a 1 km radius of the site. One of these incidents involved the release of oil to surface water. The other two incidents involved the release of fire water / foam to groundwater.

There are two surface water abstractions within 1 km of the site which are for spray irrigation.

None of these abstractions is likely to affect or be affected by the proposed development, because there will be no groundwater abstraction or contaminated discharges to groundwater from the site.

According to the British Geological Survey (BGS) 1:50,000 solid and drift map of the area (Sheet 207; Ipswich), the site is directly underlain by Glacial Sands and Gravels, overlying undifferentiated Red and Norwich Crag, with an approximate thickness of 35 m. Below the Red and Norwich Crag is the London Clay, which is present to depth on site.

The EA groundwater vulnerability map (Sheet 33; East Suffolk) confirms that the site is situated on a Minor Aquifer (Red and Norwich Crag) of high vulnerability. The site does not lie within a groundwater Source Protection Zone (SPZ).

The site is provided with a network of surface water drains, which discharge directly to an onsite soakaway, located in the southeastern corner of the site. Sanitary effluent is discharged, via foul water drains, to the municipal foul sewer network.

In addition to the foul and surface water drainage systems, there is a network of drains at Adastral Science Park which are used to manage chemical effluent. All chemicals are subjected to pre-treatment in one of three internal neutralisation

plants before being discharged to the foul sewer network. The liquid waste streams comprising organic material and halogenated solvents are prevented from entering the chemical drains, and are collected in separate drums.

At present there are no discharges to surface watercourses. As described above, all routine surface water runoff is discharged into an onsite soakaway.

Phase II Intrusive Investigations carried out at Adastral Park (ENVIRON, 2008) determined local exceedances of total petroleum hydrocarbons (TPH) in the groundwater The source of this contamination may be from underground storage tanks (UST) and general historical site operations. However, the boreholes up-hydraulic gradient and down-hydraulic gradient do not appear to have been impacted, suggesting the contamination is localised and not migrating. The TPH concentrations detected in the groundwater are not considered to pose a risk to site users or the wider environment.

Due to the localised nature of exceedances determined at Adastral Park, the absence of these compounds in groundwater, and the likely presence of hardstanding across the majority of the redeveloped site, these exceedances are not considered to pose a risk to site users or the wider environment and would therefore not have an significant impact on the SAC.

Construction Water Quality

Prior to redevelopment of the site, the four above ground storage tanks (ASTs) would be decommissioned in line with current UK Guidelines. Likewise, chemical drains in the eastern part of this site would be removed prior to redevelopment.

Any imported fill material used on site will be inert, uncontaminated material and will not lead to any impact or degradation of the soil and groundwater quality underlying the site.

The operation of construction vehicles and general construction activities give rise to the potential for surface runoff to become contaminated with hydrocarbons, silt or other construction materials. This may in turn lead to a contamination event should site drainage be allowed to enter surface watercourses or the ground untreated.

Depending on meteorological conditions, excavations may require dewatering (of accumulated rainfall or runoff) during construction. In such circumstances, care

will be taken to ensure the quality of this water is sufficiently high to allow discharge onto the surrounding site. Ponded water from excavations will be pumped into temporary infiltration ponds to remove suspended sediments. The infiltration ponds will be created on site. If oil is detected in the water from the excavation sites, it will be diverted through temporary oil interceptors prior to being discharged into the settling ponds. Discharges will also be routed through the oil interceptors to the infiltration ponds, where necessary.

Interceptors will be regularly inspected, cleaned and maintained. Full records will be kept of inspections, maintenance works and measures undertaken to sustain equipment performance. These provisions should ensure no significant impacts occur on either surface water or groundwater quality at the site or within the wider environment. The use of settlement facilities will aid the removal of any potentially contaminated material that might be derived from construction materials.

All site works will be undertaken in accordance with the EA's Pollution Prevention Guidance Note 6 *'Working at Construction and Demolition Sites'*. Construction vehicles will be properly maintained to reduce the risk of hydrocarbon contamination and will only be active when required. Construction materials will be stored, handled and managed with due regard to the sensitivity of the local aquatic environment and thus the risk of accidental spillage or release will be minimised. Construction contractors will also take full account of the requirements of the EA's General Guide to the *Prevention of Pollution of Controlled Waters* (PPG1) and guidance set out in PPG2 (*Above Ground Oil Storage Tanks*) and PPG3 (*The Use and Design of Oil Separators*).

These mitigation measures would be incorporated into a Construction Environmental Management Plan to be implemented, monitored and updated during construction. The improvement works will have a **minor positive impact** (due to remediation) on local water quality following mitigation and a **negligible impact** on the Deben Estuary SPA.

Operational Water Quality

A drainage system is already in place for the Adastral Science Park part of the site. The Phase I Environmental Review, ENVIRON (2007) included analysis of the site's drainage plans. Reportedly, no process wastewater is currently generated on site. The site is provided with a network of surface water drains, which discharge directly to an onsite soakaway, located in the southeastern

corner of the site. According to facility personnel, there are no oil separators present on site and no discharge consent is required for this wastewater stream.

The proposed development will include a Sustainable Urban Drainage System (SUDS) to manage surface runoff from the newly developed part of the site. The SUDS will include a number of soakaways to manage runoff from the new areas of hardstanding including the roads, buildings and paving areas. Residential units adjacent to the existing quarry ponds will drain into the ponds. Therefore, all surface water from the new areas of development will infiltrate into the groundwater, to mimic the existing situation.

The car parking areas and internal access roads within the new development area will be routed via oil interceptors prior to discharge into the SUDS. Therefore, routine site drainage will have a low risk of contamination and further improvements in water quality would be afforded by the SUDS measures associated with drainage design (i.e. infiltration ponds, swales etc).

Therefore, it is anticipated that the proposed development will have a **negligible impact** on surface water quality at the site and to the Deben Estuary SPA.

4.3 Noise disturbance

Currently noise impacts on the site are caused by the day to day use of Adastral Park by BT employees along with quarry works in the centre of the site.

The key potential noise and vibration sources from the proposed development are as follows:

- Temporary noise and vibration from the operation of construction vehicles and plant during the construction phase of the development along with works associated with building and landscaping; and

- An increase in road traffic noise due to increased vehicles in the areas as a result of the proposed development.

However, given the localised nature of these sources and the distance between the two sites it is unlikely that the noise and vibration generated during the construction or operational phases of the development would result in adverse impact on the Avocets within the SPA.

The potential for adverse impact on the Deben Estuary SAC due to noise and vibration during the construction and operational phases of the development are predicted to be **negligible**.

4.4 Cat Predation

The proposed residential component of the development is likely to result in a significant increase in the number of cats within Adastral Park. Research (Barratt, 1997) suggests that the house cats do not move more than 900m from the boundary of their home suburb. It is therefore concluded that cat predation would have a **negligible** impact on the Avocets within the SPA.

4.5 Recreational Pressure

Avocets generally feed on aquatic invertebrates within tidal mud flats and therefore this habitat type is of prime importance within the SPA. The addition of 2000 new homes would result in an increase in the number of people based in the area, which would potentially result in a slight increase in recreational pressure to the SPA, particularly with regard to dog walking. It is anticipated that the increased recreational pressures would primarily be focused around the public rights of way. The majority of these rights of way are located away from the SPA, with the exception of a 1 km stretch of footpath on the west side of the estuary (between OS grid reference TM278465 and TM281456). Inspection of the aerial photos and the 1:25,000 OS map shows that this path is located away from the mudflats where the Avocets feed.

Green space will also be included within the proposed development site which residents would utilise for recreation as opposed to the SPA. The proposed development aims to retain the ponds in the centre of the site and to create public open space around them. The development will also retain existing areas of woodland. Such features will contribute towards the enhancement of the amenity value of the site as the area proposed for the residential units is currently operated as a quarry. The following summarises the areas proposed as landscaping out of the total development area of 161 ha:

- central Public Park: 17.25 ha;
- a residential square: 0.5 ha (plus other small areas of public open space e.g. play areas);
- woodland area: 15.91 ha; and
- areas of private gardens (area unknown at present).

It is concluded that although there could potentially be a slight increase in recreational pressures this would have a **negligible** impact on the Avocets and the associated habitats within the SPA.

5.0 Conclusions

Based on the results of this Screening Study, it is considered unlikely that any significant adverse impacts would occur on any European sites (including Deben Estuary SPA) as a result of the proposed development at Adastral Park. This concurs with the conclusion of the East of England Habitats Directive Assessment (see Section 1.3 above).

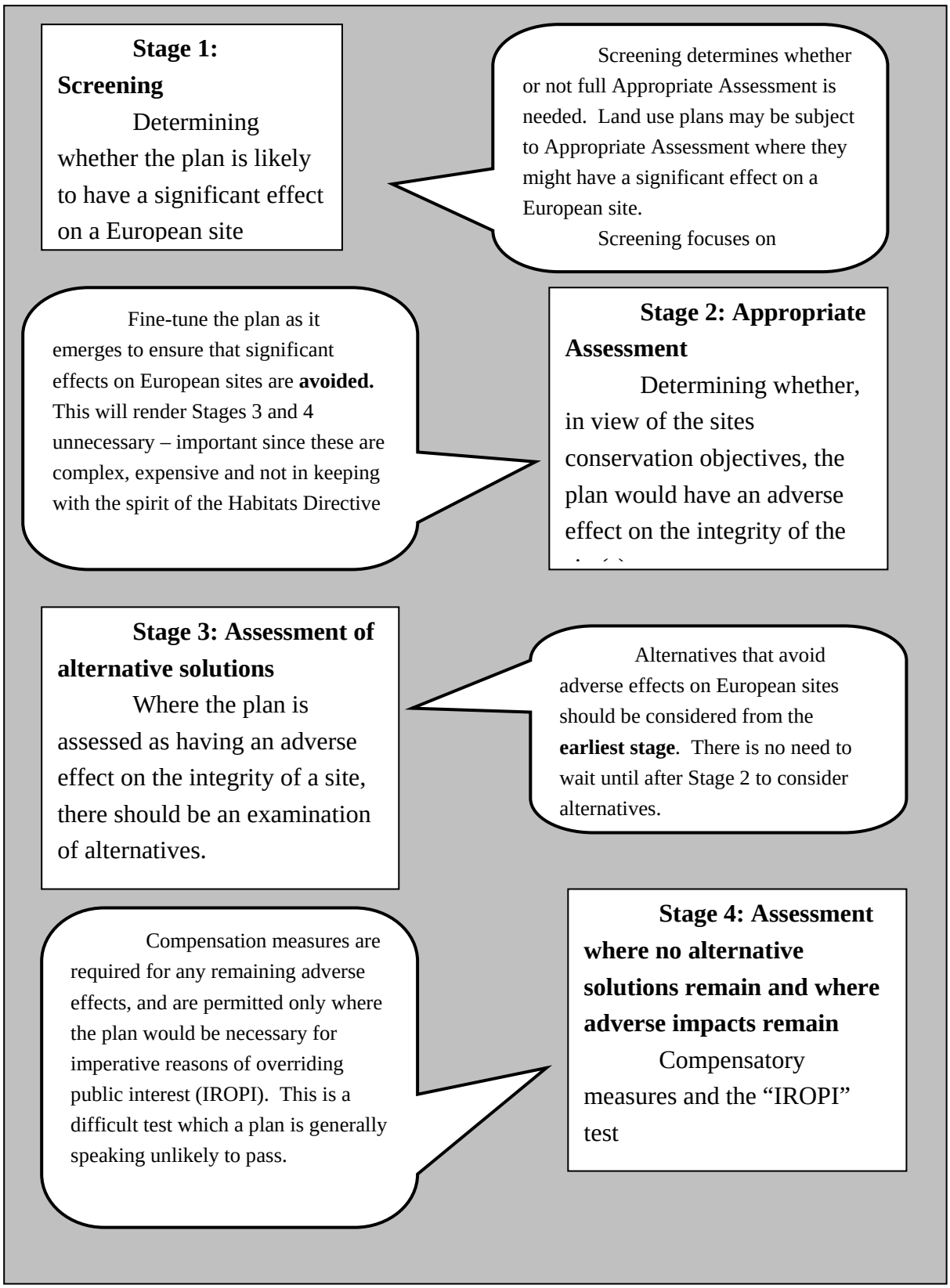
6.0 References and Bibliography

Fulton, A., 2006. *East of England Regional Spatial Strategy: Habitats Directive Assessment.* Environmental Resource Management, London

Web pages accessed July 2008:

- www.jncc.gov.uk/default.aspx?page=2023
- http://www.magic.gov.uk/

Annex A: Stages in the Appropriate Assessment Process



Stages in the Appropriate Assessment Process

APPENDIX 12.4 – NATURAL ENGLAND AA SCREENING RESPONSE

From: Williams, Pat (NE)
Sent: 12 August 2008 15:27
To: 'Hayden Torr'
Subject: RE: AA screening

Dear Hayden
We agree with the conclusions reached in the Environ Screening Report that it is unlikely that any significant adverse impacts would occur on the Deben Estuary SPA as a result of the Adastral Park proposed development. Our main concern is the increase in recreational pressure on the features for which the Deben Estuary is designated, but agree that the impact caused is likely to be negligible on the overwintering populations of Avocet on the Deben Estuary.
kind regards
Pat

++
Pat Williams
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Natural England
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01284 717591/07768 796899
01284 753658
pat.williams@naturalengland.org.uk

From: Hayden Torr [mailto:HTorr@uk.environcorp.com]
Sent: 31 July 2008 10:41
To: Williams, Pat (NE)
Cc: Kate Lyon; Rob Askew
Subject: AA screening

Dear Pat

Further to our conversation today, please find attached the Appropriate Assessment Screening Report for Adastral Park.

I look forward to hearing your comments on this.

Best Regards

Hayden Torr, Senior Consultant
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