

## **Felixstowe to Nuneaton Freight Capacity Enhancement**

### **Ipswich Chord**




## **Environmental Scoping Report**


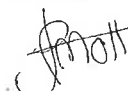

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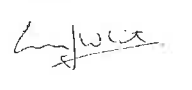

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**1.1 Purpose of the Report**

The purpose of this report is to support a request to the Infrastructure Planning Commission (IPC) for a scoping opinion under Regulation 8 of The Infrastructure Planning (*Environmental Impact Assessment*) Regulations 2009 (the “EIA Regulations”) regarding the scope of the Environmental Impact Assessment (EIA) and the likely content of the Environmental Statement. The scope of the EIA has been determined through consideration of the baseline environmental conditions of the site and surrounding area and likely environmental effects of the proposed development. In order to aid this process, this scoping report provides a brief overview of the site and the proposed development, accompanied by a location plan (Figure 1, Appendix A). Following this, the report provides an overview of the likely environmental issues associated with the proposed development, together with details of the methodology proposed for the specialist technical assessments. The report concludes by outlining the proposed content and structure of the Environmental Statement.

**1.2 Context of the Report**

The Infrastructure Planning Commission was established by the Planning Act 2008 as an independent public body dedicated to the task of assessing applications that were deemed to be Nationally Significant Infrastructure Projects (NSIPs). NSIPs cover projects in the general fields of energy, transport, water, waste water and waste. Defined thresholds regarding size and importance are contained within the Act.

For rail, NSIPs are defined as:

- *A railway that when constructed will be wholly in England;*
- *The railway when constructed will be part of a Network operated by an approved operator (e.g. Network Rail); and,*
- *The construction of the railway is not permitted development under the Town and Country (General Permitted Development) Order 1995.*

As such, it is considered that the proposed scheme at Ipswich falls under the definition of a Nationally Significant Project as it fulfils all of the above criteria.

The IPC decisions will be made in the context of National Policy Statements (NPS) which are prepared by the relevant government department for each type of development. The NPS are still under development and must pass through public and Parliamentary consultation prior to issue. In the absence of a completed NPS, approval decisions will be referred by the IPC to the Secretary of State. At present a NPS to cover transport networks has not been issued.

The proposed new infrastructure at Ipswich is considered to be a development that requires Environmental Impact Assessment (EIA) as it falls under *Schedule 2 Category 10d (Infrastructure: Construction of Railways of The Infrastructure Planning (Environmental Impact Assessment) Regulations 2009* (the “EIA Regulations”) and is likely to have significant effects on the environment due to its location, scheme characteristics and size. As a result, an Environmental Statement will be prepared to accompany the application for Development Consent Order to

the IPC, and the scheme will be 'EIA development' for the purposes of the EIA Regulations.

## **2 Background to the Development**

### **2.1 Scheme Context**

The purpose of the Felixstowe to Nuneaton Freight Enhancement Project is to provide capacity for the increasing demand for freight paths from the Port of Felixstowe, while reducing the conflict between freight trains and passenger services on the line.

Freight services are indispensable to our everyday lives; they deliver a range of goods to retailers, help supply the construction industry and distribute raw materials to power stations across the country. Over the next five years, the rail industry is investing almost £750m to make the railway more available to freight distributors. It will provide additional capacity for trains and help meet the ever growing demand for rail freight.

Network Rail is committed to upgrading the capacity of the rail freight network in Britain and, together with the industry, has put in place a Strategic Freight Network programme, which sets out the infrastructure investment requirements needed to allow more goods to be transported by rail rather than road.

A key focus of this initiative is the upgrading of the cross-country route from Felixstowe to Nuneaton, via Ely, Peterborough and Leicester. Investment in this route is critical to improve the distribution of goods from Britain's largest container port. Currently, capacity restrictions across the freight network mean that only 11% of surface freight can be distributed by rail. The remaining 89% is transported by road.

At present, 9'6" freight containers from Felixstowe destined for the West Midlands, North England and Scotland have to be transported via Ipswich, Stratford and the North London Line to join with the West Coast Main Line. This route results in conflicts with busy commuter routes and also restricts movements during peak times limiting freight capacity. The Cross Country route between Felixstowe and Nuneaton does not, at present, provide sufficient clearance for 9'6" freight containers which are growing in use by shipping companies in order to maximise their capacity.

By improving gauge and track capacity for freight movements from Felixstowe, the scheme will meet projected freight demand and by using a more direct cross country route, avoid existing conflicts with the North London Line allowing the greater provision for passenger services along this route.

Previously, twenty scheme options at nine sites along the Felixstowe to Nuneaton route were identified which have the potential to contribute to freight capacity enhancement. A two-day combined value management and risk assessment workshop was undertaken by Network Rail in spring 2009 with the aim of recommending various options to be progressed which, as a whole, would satisfy the strategic aims of increased freight capacity.

Ipswich Chord was identified as one of the schemes deemed to satisfy the strategic requirements of the Freight Capacity Enhancement Project and was chosen to be developed through to detailed design.

Operational modeling of rail movements identified a requirement to bypass Ipswich Yard by means of a new chord line connecting the Great Eastern Norwich Main line and the Lowestoft and Felixstowe branch to the north of Ipswich as the yard could not achieve the requirement of the Freight Capacity Enhancement Project.

## **2.2 Proposed Development Site**

### **2.2.1 Site Location**

The location for the proposed chord line centres on Grid Reference 614264, 244951. The site is located approximately 2km to the west of Ipswich town centre and is primarily located on land previously occupied by a Bacon Factory, land within an industrial estate and existing Network Rail track corridor. The site sits astride the River Gipping (See Figure 1, Appendix A for site location context).

The site consists of two railway corridors, the Great Eastern Norwich Main line and the Lowestoft and Felixstowe branch line, which are on existing embankments which converge to form a triangular package of land which is bound by the River Gipping to the north.

The Great Eastern Norwich Main Line, north of the River Gipping, lies within the District of Babergh. The rest of the site, including the former Bacon Factory and the Lowestoft and Felixstowe branch line, lies within the Borough of Ipswich.

The land within the railway triangle is the site of a former Bacon Factory. An embankment in the southern tip of the triangle carries a site access road to Hadleigh Road (See Figure 1, Appendix A). The topography falls gently to the north towards the River Gipping. At present, infrastructure on site consists of a site access road, which runs along the western boundary of the site, a factory building in the north west corner of the site (no longer in use), hardstanding and ephemeral grassland.

To the south of the Bacon Factory Triangle lies Hadleigh Road, residential properties and a railway depot and to the north are commercial properties including a supermarket within Boss Hall Business Park.

The Great Eastern Norwich Mainline, which runs to the west of the Bacon Factory triangle, is bound by a large sugar beet factory, which closed in 2001 (and associated former lime sludge beds – currently open grassland) an industrial estate to the west and commercial premises, a new housing development and an area of scrubby open land to the east (north of Boss Hall Business Park). It is understood that Europa Way, the crescent shaped area of open land to the east of the line, has planning permission for a mixed residential/ commercial development (See Figure 1, Appendix A).

Figure 1, Appendix A, details both site location and red line extent of works boundary which includes the land required for the proposed development site and temporary construction compound areas.

### **2.2.2 Site History**

The Great Eastern Mainline, which forms the southern boundary of the railway triangle, was constructed in Ipswich between 1846 and 1849. The section of the East Suffolk Line, which connected to Ipswich and forms the northern boundary, was constructed in 1859. Prior to this, the area consisted of open agricultural land.

By 1926 the bacon factory had become established on site, with the majority of the buildings concentrated in the southern half of the triangle. By 1976 the factory had peaked in size with the construction of the cold store building, which is the only remaining building from the original factory still present. Historical Ordnance Survey mapping indicates that the River Gipping was straightened during the 1980s moving the river alignment northwards and the reclaimed land increased the size of the railway triangle.

### **2.3 Description of the Development**

The proposed scheme would consist of the development of a 1100m chord which would link the Great Eastern Norwich Main lines with the Lowestoft and Felixstowe branch lines to the North of Ipswich. The works will require the widening of embankments along the northern boundary of the Great Eastern Norwich Mainline between Europa Way and the River Gipping in order to accommodate a third line which will form the new chord. The chord line would cross the River Gipping and run across the Bacon Factory Triangle raised on embankment, at the same level of the existing railway embankments. The construction of two bridges will be required over the River Gipping and Sproughton Road to accommodate the new line. In addition, the works will require modifications to the existing signalling and overhead electric line arrangement.

It is anticipated that construction will be completed in 2014.

### **2.4 Consultation**

As set out in the Planning Act 2008, under the Infrastructure Planning System it is necessary to carry out both statutory and public consultation of the scheme during the pre-application stage of the planning process. Consultation will be carried out in line with Section 42 and Section 47 of the Planning Act.

Statutory consultation will include all consultees relevant to the scheme listed in Schedule 1 to the Applications: Prescribed Forms and Procedure Regulations and any other consultees deemed relevant to the scheme, and will be carried out having regard to DCLG and IPC guidance and advice.

## 3 Scope of the Environmental Impact Assessment

This section provides an overview of the key activities associated with the proposed new infrastructure together with an indication of whether significant environmental effects are likely to occur as a result, thereby highlighting the topic areas which will be addressed in the Environmental Statement. Figure 1 in Appendix A shows the location of the indicative study area that will be used as the basis for this EIA. Figure 2 depicts the high level environmental constraints identified in the surrounding area.

### 3.1 Key Construction Activities and Likely Environmental Issues

The construction phase of the proposed development is likely to involve the following key activities:

- *Site clearance;*
- *Contaminated land and possible on site remediation;*
- *Piling;*
- *Earthworks;*
- *Transportation of construction materials and soils to and from site; and,*
- *Rail Construction.*

These activities have the potential to result in environmental effects, the nature of which is described in Table 3-A.

EIA Topic Area	Environmental Issues to be addressed by EIA
Air Quality and Climate	Site preparation and infrastructure construction activities have the potential to result in dust nuisance. There may be temporary increases in vehicle emissions due to construction traffic.
Noise and Vibration	Construction activities have the potential for noise disturbance at local sensitive receptors.
Townscape and Visual Amenity	There is the potential for a temporary visual impact upon local sensitive receptors as a result of construction activities.
Ecology	Impact of construction upon local ecology.
Soils, Geology and Contaminated Land	Potential for construction to mobilise contaminants held within the ground that were deposited as a result of historic activities on site.
Water Quality, Hydrology and Hydrogeology	Potential for construction activities to result in contamination of local water sources. This will be determined through an assessment of drainage design and the receiving environment.
Archaeology and Cultural Heritage	There is potential for disturbance to known and unknown archaeological features during the construction phase particularly during earth works.
Traffic and Transport	The construction phase is likely to generate a temporary increase in traffic to and from the site. The scheme will also affect local footpaths.
Socio-economic	Construction disruption has the potential to affect a range of local business on the adjacent industrial and business parks. Construction impacts upon local public rights of way.
Cumulative Impacts	The potential for construction impacts to create a greater cumulative impact upon the receiving environment in combination with other effects or in combination with other proposed construction schemes.

**Table-3-A Environmental Issues during the Construction Phase**

The activities involved in the construction phase that have the potential to result in significant environmental impacts can be summarised as follows:

- *Temporary noise impacts during construction;*
- *Temporary increase in air emissions from increased construction traffic and plant vehicles;*
- *Temporary visual impact of construction activities upon local receptors;*
- *Potential disturbance to sensitive ecology;*
- *Potential disturbance and remobilisation of contaminants in ground on site;*
- *Potential contamination of local watercourses;*
- *Potential to disturb local drainage patterns;*
- *Potential disturbance to buried archaeological features; and,*
- *Temporary increase in vehicle traffic travelling to and from the site.*

It is therefore proposed to assess all of the topics in table 3-A in undertaking the EIA. An assessment of the construction impacts will be included in each topic of the EIA and included in the appropriate chapter and not as a stand alone assessment on the effects of construction.

### 3.2 Key Operation Activities and Likely Environmental Issues

The operation of the new scheme has the potential to result in environmental effects, the likely nature of which is described in Table 3-B.

EIA Topic Area	Environmental Issues to be addressed by EIA
Air Quality and Climate	Stationary freight trains have the potential to result in periodic impacts on local air quality. The scheme will reduce the number of stationary trains and train movements in and around the rail depot to the south, but may introduce stationary trains on to the chord line affecting local receptors. The scheme will however have a beneficial impact through the reduction in road freight traffic as a result of the scheme's implementation.
Noise and Vibration	The new track alignments have the potential to result in an increase in local noise for local sensitive receptors once operational.
Townscape and Visual Amenity	The Ipswich site will require the construction of a new elevated section of track, two bridge crossings and extensive lengths of embankment works which have the potential to permanently affect local visual receptors.
Ecology	The operational scheme is considered to have minimal impact upon ecology.
Geology, Soils and Contaminated Land	The operation of the scheme is unlikely to have a long term affect upon geology, soils or contaminated land.
Water Quality, Hydrology and Hydrogeology	The construction of additional infrastructure within the floodplain has the potential to reduce the capacity and increase flood risk. It is proposed to model flood risk and implement suitable mitigation to ensure that flood risk is not increased as a result of the scheme.
Archaeology and Cultural Heritage	The operation of the freight capacity enhancements will not result in any significant effects on archaeology and cultural heritage in the area.
Traffic and Transport	Once operational the scheme will not have any adverse impact upon traffic and transport. The provision of increased freight capacity will reduce Heavy Goods Vehicle movements of the road network.
Socio-economic	The operational scheme will be constructed on land currently identified for other developments. The impact upon these schemes will be assessed.
Cumulative Impacts	The potential for the operational scheme to create a project specific cumulative impact or cumulative impact with other operational facilities.

**Table 3-B Environmental Issues during the Operational Phase**

As identified in Table 3-B the operational freight capacity enhancements may result in minor adverse impacts for noise due to the creation of new track alignments. The

presence of the additional infrastructure has the potential to adversely affect flood risk. The presence of the additional infrastructure also has the potential to be visible to sensitive receptors. Where there is a potential for significant impact associated with the operational activities of the proposed development, these will be scoped in and assessed accordingly in the EIA and appropriate mitigation considered.

The generic approach towards the EIA is provided in Section 4.1. However the methodologies and focus for undertaking the EIA varies between topic areas. This section of the scoping report therefore provides further details regarding the proposed methodologies that will be adopted to undertake the assessments of the various topic areas discussed in Section 3, with particular regard to the baseline data collection and assessment stages.

**4.1 Generic Approach**

In keeping with the requirements of the EIA Regulations, the potential environmental effects of both the construction and operation of the proposed development will be predicted and assessed for each relevant EIA topic where appropriate by undertaking the following generic stages:

- *Outline relevant planning policy, legislation and guidance relevant to that topic area;*
- *Determining the baseline conditions relevant to that topic area and identifying potential environmental receptors;*
- *Determining the sensitivity and importance of the receptor;*
- *Assessing the magnitude of the change to the receptor that is likely to occur as a result of both the construction and operation of the proposed development;*
- *Determining the likely significance of the impact on the receptor;*
- *Provision of appropriate measures to mitigate, reduce or offset any significant adverse environmental effects; and,*
- *Provision of details of any residual environmental effects that may be present following the adoption of mitigation.*

Details regarding the proposed individual methodologies to be used to provide input into the EIA are provided in Sections 4.2 to 4.13.

However, the following assessment and evaluation framework will be common to the majority of chapters in the Environmental Statement:

Effects on environmental receptors will be assessed for each phase of the scheme (construction and operation/maintenance) and consideration given to the following impact types:

- *Direct or Indirect – This assesses whether the impact directly affects receptors in the immediate locality of the project, or whether it the impact influences features or processes which indirectly affects other environmental resources.*
- *Timescale – This assesses the duration of the impact on the environmental receptor, which may be temporary, associated with the construction activities, or permanent, as a longer-term effect of the project once operating.*
- *Reversibility – Consideration is given to whether potential impacts are reversible or irreversible.*
- *Beneficial/adverse – This will identify whether the impact is likely to be beneficial (positive and favorable) to the environmental receptor, or adverse*

*(negative or damaging) or neutral, causing no change to the baseline conditions.*

- *Cumulative Effects – Other schemes or developments in the area have been considered which may result in cumulative impacts in association with this project.*

Consideration of the magnitude of effect with the importance or sensitivity of the receptor determines the degree of significance of beneficial and adverse effects. The magnitude of effect is identified using the impact types listed above. The sensitivity of the receptor is determined by its level of statutory or non-statutory protection, its vulnerability or rarity, views of consultees, specialist expertise and professional judgment.

Generally, categories of the degree of significance can be described as follows:

- *Negligible – Effect is only very slightly detectable/noticeable, or is undetectable and of no significance.*
- *Minor – Effect is slightly detectable/noticeable and of some temporary and localised effect, of a reversible nature.*
- *Moderate – Effect is fairly easily detectable/noticeable and of either temporary or permanent effect, unlikely to exceed local influence.*
- *Major - Effect is easily detectable/noticeable and likely to be of permanent, long-term significance, with irreversible implications exceeding the local area.*

**4.2 Planning and Policy Context**

In the absence of a NPS, when undertaking the EIA, it will be necessary to consider the proposed development in the context of national, regional and local planning documents to determine their relevance to the proposed development. The proposal will then be considered in terms of how it meets or addresses any adverse impacts on the objectives of the policies and guidance contained within those documents.

The following key, adopted and emerging national, regional and local documents will be taken into consideration when assessing the scheme in the absence of a completed National Policy Statement for road and rail:

<b>National Planning Documents</b>
PPS 1: Delivering Sustainable Development (2005) PPS 1: Planning and Climate Change Supplementary to PPS 1 (2007) PPS 5: Planning for the Historic Environment (2010) PPS 7: Sustainable Development in Rural Areas (2004) PPS 9: Biodiversity and Geological Conservation (2005) PPS 10: Planning for Sustainable Waste Management (2005) PPG 13: Transport (2001) PPS 23: Planning and Pollution Control (2004) PPG 24: Planning and Noise (1994) PPS 25: Flood Risk (2010)
<b>Regional Planning Documents</b>
The East of England Plan, the revision to the Regional Spatial Strategy (RSS) for the East of England, May 2008.
<b>Local Planning Documents</b>
<b>Ipswich</b> Ipswich Borough Council Local Plan 1997 (saved policies). Ipswich Borough Council – Local Development Framework: Proposed Submission Core

Strategy and Policies.

**Babergh**

Babergh District Council Local Plan Alteration No. 2 (2006) saved policies

Babergh District Council Local Development Framework, emerging documents

The EIA topic areas detailed below will examine the proposals in the context of plans, policies and programmes relating to their particular specialist areas e.g. the Local Biodiversity Action Plan for Ecology. A summary of relevant planning policy will be included in each specialist chapter of the EIA.

### **4.3 Alternatives Assessment and Need for the Development**

A description of the need for the development and an assessment of the alternatives considered will be part of the Environmental Statement.

### **4.4 Air Quality and Climate Change**

#### **4.4.1 Baseline**

In order to undertake the assessment, ambient air quality in the vicinity of the proposed development site needs to be determined.

The local authority, Ipswich District Council, have carried out a number of air quality assessments in their district in accordance with the requirements of Local Air Quality Management. The ambient concentrations of pollutants in the immediate vicinity of the Ipswich site are not high enough to require the designation of an Air Quality Management Area (AQMA). However, AQMAs have been established at three locations in Ipswich which are monitored for NO<sub>2</sub> and PM<sub>10</sub>. The closest AQMA is located 1km to the east of the Ipswich site at the road junction between Norwich Road and Valley Road. Air quality exceedances have been attributed to road vehicle traffic.

#### **4.4.2 Likely Impacts**

##### **(a) Construction Phase**

The construction of the proposed scheme has the potential to result in temporary disruption due to dust and vehicle combustion emissions at the nearest sensitive receptors. Dust emission sources are likely to include: heavy machinery movements during the site clearance, earth movements and construction activities. Emissions will vary according to the type of activity being undertaken and the prevailing weather conditions.

Additional traffic due to the construction of the proposed scheme may result in increased levels of air pollution for the properties on the local road network.

##### **(b) Operational Phase**

The proposed scheme will result in an increase in freight traffic movements on this section of line. In addition, during operation, freight trains will be stationary / idling on the proposed chord line for periods of time. At present trains switching between lines are frequently stationary for periods of time in and around the rail depot site to the south. The proposed scheme is likely to reduce the heavy use of the depot for

freight movements, improving air quality in the immediate vicinity of the depot. It will however, to a limited extent, transfer the impact of stationary trains to the chord line and potentially result in reduction of air quality for receptors in its vicinity.

Despite the potential to generate adverse impacts, it is anticipated that air pollutant concentrations will remain within the Air Quality Objectives.

#### **4.4.3 Proposed EIA Assessment**

The effects of both construction and operation will be considered for the proposed development with regards to its potential impact on local air quality.

Published data from the local authorities, together with data published on the NETCEN air quality archive will be used to estimate background pollutant concentrations around the development areas. We do not propose to carry out any specific air quality monitoring in the vicinity of the development sites.

The assessment will, in particular, consider the consequences of releasing substances likely to increase levels of Air Quality Strategy pollutants. Note will be taken of nearby sources of pollution, and improvements the scheme will make to the existing rail traffic issues, to ensure that consideration is given to the cumulative impact of the assessment.

A qualitative assessment will be undertaken for construction impacts associated with fugitive dust emissions, based on the distances to receptors and mitigation measures proposed.

An assessment of likely emissions from on-track vehicle movements will be undertaken to assess operational impact. This will primarily focus on the potential impact from stationary freight vehicles on local receptors and will take into consideration any improvements to local rail movements afforded by the proposed scheme.

An assessment will be made with regards to climate change impacts associated with the development from vehicle traffic. This will be given in the context of both UK and global emissions of the pollutants. The climate change impact of the scheme will be considered by evaluating the greenhouse gas emissions arising as a consequence of the development. These will include carbon dioxide and methane.

### **4.5 Noise and Vibration**

#### **4.5.1 Baseline**

It is considered likely that the scheme will have an effect on the noise climate in the local area. There are residential dwellings in the vicinity of the proposed scheme which are considered the nearest noise sensitive receptors.

#### **4.5.2 Likely Impacts**

It is anticipated that construction activities have the potential to generate noise which could cause disturbance. In addition, some night time construction work will be necessary to maintain the operability of the associated rail lines during daytime commuter periods.

Operational noise impact is likely to result from the introduction of new train movements in the vicinity of local receptors on the new track alignment. Although there is the potential for noise squeal generated on the curved chord connection, this is situated some 200m from the nearest sensitive receptors and is partially screened by intervening commercial buildings. As such, noise squeal is not considered to represent a significant issue and will not be covered in this assessment.

Vibration attributable to operational train movements and construction activities has the potential to be perceptible at sensitive receptors in the immediate vicinity of the line. As such, both construction and operational vibration will be considered as part of the assessment.

#### **4.5.3 Proposed EIA Assessment**

The following established assessment criteria will be used to assess the noise and vibration impact of the proposed development.

A noise survey will be undertaken at up to 4 noise sensitive receptors, to be determined in agreement with the local authority. In addition, vibration measurements will be undertaken to establish existing vibration levels at the closest property to the line (assuming permission to monitor is obtained) and to provide a basis for predicting likely vibration impact as a consequence of the scheme.

Measurements will cover a 24 hour weekday period, in order to establish representative ambient and background noise levels for the night time, evening and daytime periods. The noise measurements will be undertaken with precision grade type 1 instrumentation and with due regard to *British Standard (BS) 7445: 2003 - Part 1: Description and Measurement of Environmental Noise*. Vibration measurements will be undertaken using a Vibrock V902 dual channel, 3-axis vibration analyser for continuous level recording or logging of vibration events plus a vibration dose value (VDV) transducer. Peak particle velocity (PPV) and VDV levels will be recorded.

Noise modelling, using a proprietary software package such as CadnaA, of the affected rail network with and without the proposed scheme will be undertaken. The noise impact of the proposed scheme, particularly in respect of night time rail movements can then be determined.

An assessment of likely construction noise and vibration levels, particularly during the night time, will be undertaken in line with *BS 5228-1: 2009 - Code of practice for noise and vibration control on construction and open sites, Part 1: Noise*. Consideration will be given to likely noise levels and the guidance on noise limits in *BS 5228-1: 2009*. Discussions will be held with relevant officers of the Local Authority to determine their policies on such work and agree suitable hours of work and practices. Particular consideration will be given to any piling operations.

In order to determine noise level differences due to increased traffic flows during construction, reference will be made to *Calculation of Road Traffic Noise, 1988* produced by the Department of Transport.

The Institute of Acoustics and Institute of Environmental Management and Assessment have produced draft guidance on noise impact assessment (*Guidelines for Noise Impact - Consultation Draft, 2002*). According to this guidance, the noise impact at a property/location may be categorised according to the changes in noise

level. Various factors, such as the time of day, nature of the noise source and frequency of occurrence, must also be considered to determine whether the impact should be placed in a higher or lower category. From a summary of the effects at relevant receptors, a judgement is made of the overall noise impact

The World Health Organisation (WHO) has produced a set of guidelines, which indicate the likelihood of disturbance in open spaces during the daytime and also provides guidance on acceptable noise levels at night to minimise the potential for sleep disturbance. These guidelines will be considered in the assessment process to give an indication of the likely impact on the local community and to determine the need for noise mitigation measures.

Where applicable, the assessment will make recommendations for mitigation measures. The potential effectiveness of proposed mitigation measures will be predicted using the CadnaA model, and measures considered appropriate included within the proposed layout and design.

Reference will be made to *BS 5228-2: 2009 - Code of practice for noise and vibration control on construction and open sites, Part 2: Vibration*. The operational vibration assessment will be determined in line with British Standards *BS 6472: Guide to evaluation of human exposure to vibration in buildings* and *BS 7385: Evaluation and measurement for vibration in buildings. Guide for measurement of vibration and evaluation of their effects on buildings*.

## **4.6 Townscape and Visual Amenity**

### **4.6.1 Baseline**

The study area is located in a predominately urban setting. Land use in the vicinity of the site is mixed. Two railway corridors, the Great Eastern Norwich Main line and the Lowestoft and Felixstowe branch line, flank the site on embankment which converge to form a triangular package of land which is bound by the River Gipping to the north. The land within the railway triangle is the site of a former Bacon Factory. An embankment in the southern tip of the triangle carries a site access road to Hadleigh Road. The topography falls gently to the north towards the River Gipping. At present infrastructure on site consists of a site access road which runs along the western boundary of the site, a factory building in the north west corner of the site (no longer in use), hardstanding and ephemeral grassland.

To the south of the Bacon Factory Triangle lies Hadleigh Road, residential properties and a railway depot. To the north are commercial properties including a supermarket within Boss Hall Business Park.

The Great Eastern Norwich Mainline which runs to the west of the Bacon Factory triangle is bound by a large sugar beet factory, which closed in 2001 (and associated former lime sludge beds – currently open grassland) and Elton Park Industrial Estate to the west and commercial premises, a new housing development and an area of scrubby open land to the east (north of the River Gipping). It is understood that Europa Way, the crescent shaped area of open land to the east of the line, has planning permission for a mixed residential/ commercial development.

Suffolk County Landscape Character assessment defines the area as Urban.

Further baseline information for the assessment will be derived from both desk study and site visits. The desk study will focus on the identification of potential townscape constraints including designated sites.

In forming the baseline information, potential townscape constraints will be considered, including determining the location of any designated environmental sites, habitats, flora and important landscape features. Information regarding published townscape character will be obtained from Natural England's Landscape Character Initiative, the Ipswich Borough Council Local Plan (1997), Babergh District Council Local Plan Alteration No. 2 (2006) and emerging Local Development Framework respectively.

Potential townscape and visual receptors will be identified by visiting the site and assessing site specific information such as topography and existing townscape features that may interrupt views of the site. This information will define the visual envelope or zone of visual influence for the scheme.

#### **4.6.2 Likely Impacts**

Potential impacts on townscape and visual amenity are summarised below:

- *The embankment of the proposed chord line will be visible from the public footpath that runs along the River Gipping;*
- *The construction of a new bridge over the River Gipping will also be visible from the public footpath;*
- *A bridge extension will be constructed across Sproughton Road and will be visible from residential properties in the immediate vicinity of the site; and,*
- *Embankment and/or retaining walls constructed along the Great Eastern Norwich Main line will be visible to residential properties on Europa Way.*

#### **4.6.3 Proposed EIA Assessment**

The townscape and visual impact assessment will be undertaken in accordance with *Guidelines for Landscape and Visual Impact Assessment* published by the Landscape Institute and the Institute of Environmental Management and Assessment (2002). In addition, supplementary guidance from the Transport Appraisal Guidance (TAG)<sup>1</sup> Townscape sub-objective will be used to aid the assessment.

The assessment will take in to account the baseline townscape character and extant landscape features, together with the existing visual quality and visual amenity in the vicinity of the site. The ability of the townscape to absorb change (sensitivity) will also be recorded.

The assessment of potential impacts of the development will consider the potential effects of construction processes and any ancillary works directly associated with the proposed development including temporary works, the operational effects and residual effects.

An assessment will be made of the scheme's general compliance or conflict with specifically landscape-related regional and local plan policies.

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<sup>1</sup> Transport Appraisal Guidance ( Department for Transport, 2004)

The assessment will be supported by the provision of photomontages which will be provided for interpretation by decision makers and stakeholders. The location of photomontages will be agreed with the Infrastructure Planning Commission and the local authority in advance of the Environmental Impact Assessment.

Mitigation measures will be suggested where necessary, including design and finish of visible structures to reduce potential impacts on landscape character and visual amenity and compensatory landscape treatments, including landform and planting design as necessary.

## **4.7 Ecology**

### **4.7.1 Baseline**

Site specific ecological data has been gathered by means of a Phase 1 Habitat Survey which provides a standardised system for surveying, classifying and mapping wildlife habitats. This survey identified habitats that are contained within the proposed development site and the key plant species for each of those habitat types.

A Phase 1 Habitat Report for the site published in October 2009 identified the following constraints:

The River Gipping which bounds the site to the north is designated as a County Wildlife Site (See Figure 2, Appendix A). Alderman Canal located 1.2km south-east of the site is also designated a County Wildlife Site. There are no statutory designated nature conservation sites within 2km of the Ipswich site. However, 3.3km to the south lies the Stour and Orwell Estuaries RAMSAR and SPA. As the site has a hydraulic connection to this designation via the River Gipping the potential impact of the scheme on this designation will require Appropriate Assessment.

The main factory building on site was deemed to be of moderate roosting potential for bats and scattered bat droppings were observed within a room in the south east corner of the building.

Reptiles are known to inhabit and potentially breed within the site. A reptile relocation programme was carried out in 2005 which moved 273 slow worms, common lizards and grass snakes from the main site to a reptile relocation area in the northern corner of the site. The area is no longer fenced off and as such reptiles have been free to recolonise the site. A survey in 2008 confirmed the continued presence of reptiles with slow worm and common lizard being potentially high populations.

A biological record search conducted for the Phase 1 report in 2009 indicated records of otter in the vicinity of the site, the closest being approximately 1.3km to the south east and site survey indicated that the river adjacent to the site is potentially suitable for otters. The search also identified water vole records, the closest being 200m north east of the site. Site assessment concluded that the river bank at this locality is potentially suitable due to bank side vegetation for cover and food, but is sub-optimal due to the large size of the river and its rapid flow.

The site contained numerous opportunities for nesting birds and also hosted numerous stands of Giant Hogweed.

An invertebrate survey carried out in 2004 concluded that the species diversity of invertebrates at the site was low. However, due to the age of the survey this is not suitable for firm conclusions to be drawn as this may not reflect current site conditions.

Additional ecological surveys will be undertaken where a potential adverse impact has been identified and further data is required to enable an accurate assessment of likely impacts (both positive and negative) of the development both during construction and operation. The assessment will investigate any ecological enhancement measures that could be incorporated in the site or immediate surrounding area, which would be seen as a benefit from the development.

#### **4.7.2 Likely Impacts**

At this stage it is not possible to accurately predict the likely impacts. However it is likely that to a lesser or greater degree, these will include:

- *Habitat loss;*
- *Severance;*
- *Direct mortality;*
- *Changes to hydrology;*
- *Water pollution;*
- *Effects of construction lighting;*
- *Dust/air pollution;*
- *Disturbance (noise/vibration); and,*
- *Alien species transfer e.g. Giant Hogweed.*

Ecological features are the subject of a wide variety of legislation and policy. Some potential impacts would constitute an offence under legislation and would not be acceptable without suitable mitigation and/or (where necessary) Natural England licences. Other potential impacts are a material consideration within the planning system. Such potential impacts would therefore come under the scrutiny of statutory consultees and other interested parties as well as the consenting authorities.

#### **4.7.3 Proposed EIA Assessment**

The proposed assessment would be carried out in line with guidance from the Institute for Ecology and Environmental Management (IEEM) Guidelines for Ecological Impact Assessment in the United Kingdom (IEEM, 2006).

The results of the Phase 1 Habitat Survey, in conjunction with the consultation information, determined the requirement for the following surveys to be undertaken as part of the EIA Ecology assessment:

##### **(a) Bat Survey**

It is proposed to carry out additional bat surveys based on the initial findings of the Phase 1 habitat report. Three evening and one dawn bat roost survey will be carried out to determine if bat roosts are present within the on site building (Bat Conservation Trust Bat Survey Good Practice Guidelines 2007). These surveys will be undertaken during the recommended survey season (April to mid-October).

**(b) Water Vole and Otter Survey**

As biological records indicate the presence of water vole and otter in the vicinity of the site and the potential suitability of the river habitat to support such species it has been deemed prudent to carry out a brief survey to ensure that these species continue to be absent from site and are not likely to be affected by the emerging scheme design.

**(c) Bird Survey**

Due to the proximity of the site to the RAMSAR and SPA site previously described a survey to propose mitigation for breeding birds will be carried out. It is best practice to mitigate for important Schedule 1 bird species that may be present on site rather than simply clear vegetation outside of bird nesting season.

**(d) Invertebrate Survey**

An invertebrate survey of the site will be carried out in order to update the previous survey carried out in 2004.

**(e) Appropriate Assessment- Stage 1 Screening Assessment**

An Appropriate Assessment (AA) is a statutory requirement under directive 92/43/EEC (the Habitats Directive) on the Conservation of Natural Habitats and of Wild Fauna and Flora. It requires that any plan or project not directly connected with or necessary to the management of the designated habitats site, but likely to have a significant effect, either individually or in combination with other plans or projects to be subject to an AA. Due to the presence of the Stour and Orwell Estuaries RAMSAR/SPA and the hydraulic connectivity to the development site it will be necessary for the IPC to carry out such an assessment to ensure there will be no impact upon the designation. The ES will contain a report to inform the AA, which will focus on the implications for the RAMSAR/ SPA site in view of the site's conservation objectives.

**4.8 Geology, Soils and Contaminated Land****4.8.1 Baseline**

The geology of the site comprises drift deposits consisting of 2.5m of Alluvium overlying River Terrace deposits of sand and gravel of approximately 12m depth. The underlying solid geology consists of Upper Chalk.

Previous contamination assessments of the site indicate that the soils are slightly impacted by a range of contaminants including hydrocarbons, ammonium, heavy metals and pathogens. Asbestos fibres were also encountered within the Made Ground and the groundwater was found to be contaminated with ammonium.

Further information will be gathered for the geology, soil and contaminated baseline of the site and will be determined by means of reference to published geological and reference to groundwater vulnerability maps for the area, together with abstraction and discharge records in the vicinity of the site in order to determine the sensitivity of potential receptors. In addition further intrusive ground investigation of the site will be carried out and the results will inform the assessment.

#### 4.8.2 Likely Impacts

Environmental impacts in relation to Geology, Soils and Contaminated Land may include the following:

- *Impact on below ground important geological deposits and consideration for waste, reuse and recycling;*
- *Impact due to the release and spread of contaminants within rocks and soils; and,*
- *Impact on underlying soil or rock strata relating to construction activities.*

#### 4.8.3 Proposed EIA Assessment

The assessment will be undertaken in line with CLR11: Model procedures for the management of land contamination<sup>2</sup>, and will primarily focus on the potential for the creation of contamination pathways during the construction process and the need for any remediation in order to mitigate this issue. Previous site investigation reports available for the site will be consulted and supported by further intrusive surveys across the development site, carried out in line with BS10175: Investigation of Potentially Contaminated Sites: Code of Practice. The assessment will consider the remediation measures that may be required to render the site suitable for use where applicable. A conceptual site model will be developed for the site and accompany the assessment. Mitigation measures and recommendations for remediation will be identified as appropriate.

### 4.9 Water Quality, Hydrology and Hydrogeology

#### 4.9.1 Baseline

##### (a) Surface Water

The River Gipping flows from west to east through the site (See Figure 2, Appendix A). The river's source is near to the north east of Stowmarket, approximately 23km north of the site. The river continues through Ipswich before discharging to the tidal River Orwell.

Water quality is measured by the Environment Agency on the River Gipping at Bramford Mill, approximately 2km upstream of the site. The most recent available data is from 2008, and shows that the chemical water quality was Grade B and biological quality was Grade A.

##### (b) Groundwater

The site is situated within the Outer Area of a Groundwater Source Protection Zone (GSPZ) (See Figure 2, Appendix A). This is associated with a major aquifer present at depth within the Upper Chalk. A previous ground investigation report for the site produced on behalf of the East of England Development Agency<sup>3</sup> suggested that the Chalk is likely to be hydraulic continuity with groundwater present within the overlying drift deposits, which are in turn in hydraulic connectivity with the River Gipping.

<sup>2</sup> Contaminated Land Report 1, Model procedures for the management of land contamination, Environment Agency 2004

<sup>3</sup> Ground Conditions Investigation and Assessment, White, Young & Green on behalf of the East of England Development Agency, 2004.

### **(c) Flood Risk**

The Ipswich site lies within the Environment Agency designated Flood Zone 1 (*zone 1 is defined as having a low probability of flooding equivalent to a 1 in 1000 year risk*) and will be raised above the natural ground level. As such assessment suggests that this site is not at significant risk from flooding of any source. The site also does not represent a significant risk of flooding to other areas. The proposed new bridge over the River Gipping is likely to represent the most significant issue as it crosses Flood Zones 2 and 3 which are constrained to the river channel and has the potential to increase flood risk due to a loss of flood storage capacity.

Further relevant baseline data for the study area will be collected from data sources such as the Environment Agency website, the MAGIC website and the associated Envirocheck report.

In addition, the Environment Agency and Internal Drainage Boards (East Suffolk IDB – Ipswich) will be consulted to confirm baseline data and to identify any further constraints. Topographical information and existing ground conditions data will also be reviewed.

### **4.9.2 Likely Impacts**

Impacts are possible on surface water quality, groundwater quality and flood risk during construction of the development. It is not anticipated that there will be any operational impact upon ground and surface water and this will be scoped out of the assessment. The operational scheme will however have the potential to affect flood risk. Potential impacts include the following:

#### **(a) Hydrology and Surface Water Quality**

- *Potential impacts as a result of spills, leaks and sedimentation during construction; and,*
- *Pollution from site run-off during construction.*

#### **(b) Groundwater**

- *Potential for polluting materials to reach groundwater, particularly if pathways are created by disturbance of the ground during construction; and,*
- *Piling and intrusive groundworks have the potential to affect groundwater flow patterns.*

#### **(c) Flood Risk**

- *Construction of the bridge over the River Gipping has the potential to encroach into the flood risk area identified along this stretch of river and reduce flood storage capacity;*
- *The bridge may be at risk of the effects of flooding; and*
- *The development may increase flood risk downstream due to increased run-off rates.*

### **4.9.3 Proposed EIA Assessment**

The surface water quality assessment will be undertaken in accordance with statutory environmental guidance and legislation. It is proposed to use guidance set

out within the Design Manual for Roads and Bridges) Volume 11 Section 3: Road Drainage and the Water Environment. The methodology was originally produced for the assessment of the impact of highway development on the water environment, but lends itself to other site developments as it enables systematic ranking of water environment features and determining the significance of potential impacts.

In particular, the impact assessment will consider:

- *The potential impact on soils and existing site drainage during site preparation;*
- *The disposal, treatment and attenuation of surface water run-off during both construction and operation; and,*
- *The handling and storage of construction materials, fuels and oils.*

#### **4.9.4 Flood Risk and Drainage**

A Flood Risk Assessment will be undertaken for the project, the findings of which will be used to inform the water quality chapter of the Environmental Statement. Relevant baseline data for the study area will be collected from data sources such as the Environment Agency website, the MAGIC website and the associated Envirocheck report.

A walkover survey of the site will be conducted, which will include surrounding areas where permission allows. This will confirm existing surface drainage features and will identify potential hydraulic constraints and anticipated surface drainage flow paths.

Reference will be made to the appropriate Strategic Flood Risk Assessments:

- *Ipswich Borough Council – Draft Strategic Flood Risk Assessment, November 2007;*
- *Babergh District Council – Strategic Flood Risk Assessment, March 2009; and,*
- *East Cambridgeshire District Council – Strategic Flood Risk Assessment, 2005.*

The assessment will be carried out in accordance with the requirements of PPS 25 Flood Risk & development and will consider the potential for the development to affect local drainage patterns and flood risk. This will be carried out through consultation with the Environment Agency and site walkover surveys.

#### **4.10 Archaeology and Cultural Heritage**

##### **4.10.1 Baseline**

Initial baseline data indicates that items of archaeological interest have been previously identified within the immediate vicinity of the proposed scheme footprint (See Figure 2, Appendix A).

These include:

- *A Bronze Age collared urn on the Bacon Factory Site;*
- *Neolithic and Bronze Age Pottery at the current location of Europa Way;*
- *Palaeolithic implements including hand axes at the current location of the new residential development off Europa Way;*

- *Bronze Age doubled ring ditch and four intersecting graves at the Morrisons Supermarket site; and,*
- *Two finds of Saxon pottery and an early Saxon cemetery on the Boss Hall Industrial Estate.*

There are no listed buildings or Scheduled Ancient Monuments in the vicinity of the proposed development site.

Further baseline data will be gathered through a desk based assessment (DBA) and walkover survey developed in line with the Institute for Archaeologists Standard and Guidance for the preparation for an archaeological desk based assessment (IfA 2008). The study area will be defined as part of the initial stage of the DBA. Information for the DBA will be gathered from the following sources:

- *English Heritage National Monuments Record (NMR);*
- *Suffolk Historic Environment Record (HER);*
- *County Record Office for cartographic sources (pre-Ordnance Survey and early Ordnance Survey maps and plans) and other relevant documentary sources;*
- *Local Studies Library;*
- *Site walkover;*
- *Readily available online sources; and,*
- *Regional and Local development plans.*

#### **4.10.2 Likely Impacts**

The likely impacts have been considered in respect of Archaeology, Historic Buildings and Historic Landscape as follows:

##### **(a) Archaeology**

The development has the potential for significant impacts to archaeological remains of Low to High Value, including:

- *Partial or complete removal of known and unknown archaeological remains;*
- *Impacts upon setting including visual intrusion or severance; and,*
- *Noise intrusion or vibration.*

The exact nature and/or extent of many sites are unknown. It is likely that a staged programme of archaeological investigation will be required to support the environmental statement.

##### **(b) Historic Buildings**

There are no listed buildings in the vicinity of the development site; however, there may be local non-designated buildings that would need to be considered as part of the assessment.

##### **(c) Historic Landscape**

There are no historic landscape designations in the vicinity of the development site as designated by the local plans of Ipswich and Babergh Councils. However, there maybe landscapes of historic landscapes that have not been designated that may need to be considered as part of the assessment.

### 4.10.3 Proposed EIA Assessment

Assessment will be undertaken following the guidance contained within the Design Manual for Roads and Bridges Volume 11, Section 3, Part 2 (2007). In brief, this assessment will comprise a detailed examination of desk-based sources, including visits to archives and site walkover surveys. This would lead to an assessment of the value of all known cultural heritage sites and the magnitude and significance of likely impacts upon them. The assessment would also recommend further works where necessary to provide a greater degree of information if considered applicable).

The assessment will cover all three sub-topics (Archaeology, Historic Buildings and Historic Landscape) and will cover a study area defined for each sub topic to allow a robust assessment of potential impacts.

#### (a) Archaeological Remains

- *As recommended by DMRB, the study area for the archaeological remains sub-topic should be the route corridor and an area 500m wide on either side.*

#### (b) Historic Buildings

- *For the historic buildings subtopic, the study area for historic structures shall be defined as a 200m buffer to either side of each route option.*
- *Data for Listed Buildings outside this area will also be gathered; on-site assessment will then be carried out by a Historic Buildings Specialist to identify potential impacts upon designated structures outside the 200m study area. Any such structures will then be assessed as part of the baseline study.*

#### (c) Historic Landscape

- *The study area for the historic landscape sub-topic shall be defined as a 500m buffer to either side of each route option as recommended by DMRB.*
- *For the purposes of assessment, the historic landscape will be divided into “types” (Rippon 2004). These areas will represent all of the individual elements, parcels and components within the study area which contribute to the broader categories of type.*

An assessment of the value of each cultural heritage asset within the study area will be undertaken on a five-point scale of Very High, High, Medium, Low, Negligible and Unknown, according to the criteria provided in DMRB. Assessment of setting, its contribution to historic legibility and capacity for change will also be undertaken for all sites of greater than Low value.

Magnitude and significance of impact upon cultural heritage assets will be assessed in accordance with the criteria provided in DMRB.

## 4.11 Traffic and Transport

### 4.11.1 Baseline

It is anticipated that the construction phase of the development will require a significant number of deliveries to site using the local highway network. Options to import material to site via alternative methods, specifically by rail to the adjacent rail

depot to the south of the Bacon Factory triangle, will be investigated. However, it is likely that material will be delivered and stored at one or more locations and will ultimately require road transfer to specific points along the scheme footprint. A large proportion of the traffic generated will be in the form of Heavy Goods Vehicles. This will be a temporary impact associated with the scheme.

Road deliveries will arrive to site via the A14 from the north and A12 from the south. Final haul routes are to be decided but are likely to include Sproughton Road and London Road (See Figure 1, Appendix A).

To assist in determining the current operation and capacity of the local transport network in the vicinity of the site an initial meeting with representatives from the Local Highway Authority will be carried out. The purpose of the meeting would be to discuss the scheme and construction proposals, gain agreement for the proposed assessment methodology and to obtain information regarding other future committed and uncommitted development in the vicinity of the site.

Traffic data additional to any existing data available from the Local Highways Authority will be collected via new surveys at locations to be agreed.

#### **4.11.2 Likely Impacts**

The likely impacts from construction traffic will, in part, be covered in the noise and air quality chapters of the Environmental Statement. In addition to noise and air quality impacts the scheme is likely to result in disruption to the local road network as a result of an increase in the number of vehicles and the slower movement of large delivery vehicles, it is acknowledged that the likely impacts will be temporary in nature and restricted to the construction phase of the development.

#### **4.11.3 Proposed EIA Assessment**

The transport assessment will consider the potential effects of the proposed new development on the local transport network during construction. The assessment will be undertaken in keeping with current best practice, including the DfT/DCLG *Guidance on Transport Assessments (2007)* and the *Design Manual for Roads and Bridges Volume 5*. In particular, the assessment will consider:

- *Existing conditions;*
- *Future Committed Developments / Planned Highway Improvements;*
- *Development site access requirements/traffic impact;*
- *Traffic (Trip) Generation;*
- *Modal Split and Traffic Distribution; and,*
- *Mitigation Measures/Proposals.*

Given the nature of the development, the assessment will focus on the impacts arising from traffic associated with construction stage of the development.

### **4.12 Socio-economic**

#### **4.12.1 Baseline**

The proposed development will be constructed in the immediate vicinity of numerous commercial and light industrial premises located on the numerous industrial estates and business parks which surround the site.

Construction activities will result in a temporary increase in construction traffic on the local road network which is likely to affect local residents and business.

The scheme will require the construction of a bridge over the River Gipping

#### **4.12.2 Likely Impacts**

During construction there is the potential for adverse impacts on a number of commercial operations located in the immediate vicinity of the site.

Construction of the bridge over the River Gipping is likely to result in a temporary closure/ disruption to the Gipping Way footpath which runs along the north bank of the River Gipping.

Construction of the extended bridge crossing over Sproughton Road is likely to result in some temporary disruption to the highway.

The footprint of the operational scheme will be located in areas currently the subject of approved planning applications as described in section 4.14. It is likely that the proposed scheme will affect the validity of the current proposals for these sites, and their ability to be constructed in the manner currently proposed.

#### **4.12.3 Proposed EIA Assessment**

The assessment would draw on key social and economic features of planning policy and strategies and concentrate on the following issues:

- Impact on local public rights of way
- The economic effect of construction upon local businesses
- The economic effect of the operational scheme upon existing development proposals

#### **4.13 Sustainability**

Sustainability will be integral to all phases of the project and will be addressed throughout design, construction and operation of the scheme. The project will pay particular consideration to sustainable construction design including the carbon impact of materials, drainage, waste minimisation and disposal. The sustainability assessment will consider how sustainable the development is, in light of objectives and indicators set out in various guidance documents:

- *Securing the Future – the UK Government Sustainable Development Strategy, 2005, Department for the Environment, Food and Rural Affairs (DEFRA);*
- *Waste Strategy for England 2007;*
- *UK Sustainable Development Indicators (2005);*
- *Community Strategy – Local Government Act (2000);*
- *PPS 1: Delivering Sustainable Development (2005);*
- *The East of England Plan (Published May 2008);*
- *Network Rail Sustainability Policy; and,*
- *Network Rail Corporate Responsibility Report.*

A separate sustainability statement for the proposal will be developed and submitted along side the Environmental Statement in support of the Development Order Consent.

#### **4.14 Cumulative Effects**

As outlined in Schedule 4 of the EIA Regulations, the ES will also consider cumulative impacts of the proposed development. Therefore, in addition to assessing all of the individual impacts, the ES will consider whether any of the remaining residual impacts generated by the proposed development, would result in significant effects when considered together. Furthermore the ES will also consider whether the impacts of the proposed development when considered cumulatively with the impacts of other existing or permitted schemes could generate significant environmental effects.

Consequently, when the ES is prepared, potentially interacting impacts like ecology, landscape, air and water quality will be considered as part of each of the individual assessments.

It is acknowledged that the proposed footprint of the scheme incorporates areas of land subject to existing valid planning permissions that are likely to be affected by the new scheme proposals.

The Bacon Factory Triangle is the subject of four approved applications from the same developer and includes the construction of Class B1, B2 and B8 commercial units, construction of a site access road and refurbishment of the existing cold store building to create 9 commercial units for B1, B2 and B8 use.

The Europa Way site is subject of an approved planning application for the development of a food store and mix use commercial units, residential flats, retirement dwellings and a decked car park.

The interactions between the proposed scheme and the existing planning permissions in terms of their design and associated planning conditions will be appropriately considered, assessed and resolutions sought and incorporated into the proposed design.

The Environmental Statement (ES) for the proposed development will be prepared in accordance with the Infrastructure Planning (Environmental Impact Assessment) Regulations 2009 (SI 2009/2263) and is likely to comprise four volumes:

- **Volume 1:** *Non-Technical Summary*
- **Volume 2:** *Main Statement*
- **Volume 3:** *Technical Appendices and Supporting Information; and*
- **Volume 4:** *Figures, Photographs and plans.*

The Main Statement provided in Volume 2 will be a concise document with technical information provided where possible as appendices in Volume 3 to ensure the report remains a readable document. The main statement will report any likely significant effects and, where appropriate, any proposed mitigation. The document will be written in a manner suitable to the casual reader and will contain a glossary of technical terms and abbreviations used in the report.

In keeping with the requirements of the EIA Regulations (Schedule 4, Part 1 and 2), Volume 2 of the Environmental Statement will include the following:

- *Introduction to the scheme and environmental assessment process;*
- *Detailed description of the scheme and its environmental context;*
- *Description of the main alternatives considered for the proposed development;*
- *An description of the need for the development; and,*
- *The assessment of any significant impacts that may occur both during construction and operation of the development including a description of any mitigation measures required and residual impacts.*

In addition, it is likely that each topic chapter will be structured in the following manner:

- *Short introduction outlining the scope of the assessment;*
- *Relevant planning policy;*
- *Description of the sources of information to be used in the assessment together with and indication of the legislative drivers and relevant guidance;*
- *Details of the methodology for establishing the baseline conditions and for predicting the magnitude and the significance of the impacts;*
- *Details of the existing baseline conditions;*
- *An assessment of the magnitude and the significance of the various predicted impacts. As required by the EIA Regulations, this will state whether the impacts are positive, negative, short-term, long-term, reversible, irreversible, direct, indirect;*
- *Discussion of the mitigation measures to prevent, reduce or offset impacts;*
- *An outline of the remaining residual impacts following the implementation of the mitigation measures; and,*
- *Details of proposed monitoring programmes to monitor the effectiveness of mitigation measures and the extent of any residual impacts.*

The ES will provide details of cumulative impacts as required in Schedule 4 of the EIA Regulations, thereby ensuring that potential impact interactions are appropriately assessed.

## 6 Summary and Conclusions

The proposed scheme would consist of the development of a 1100m chord which would link the Great Eastern Norwich Main lines with the Lowestoft and Felixstowe branch lines to the North of Ipswich. The works will require the widening of embankments along the northern boundary of the Great Eastern Norwich Mainline in order to accommodate the new chord line. The chord line would cross the River Gipping and run across the Bacon Factory Triangle raised on embankment at the same level of the existing railway embankments. The construction of two bridges will be required over the River Gipping and Sproughton Road. In addition, the works will require modifications to the existing signalling and overhead electric line arrangement.

This Scoping Report has been prepared to support a formal request to the IPC to provide a scoping opinion under the Infrastructure Planning (Environmental Impact Assessment) Regulations 2009 (SI 2009/2263) regarding the scope of the EIA and the likely content of the Environmental Statement which will accompany the Development Consent Order application for the proposed scheme.

In doing so, this Scoping Report provides a brief overview of the site, the baseline environmental conditions and the proposed development, followed by an overview of the likely environmental issues associated with the development and details of methodologies proposed to undertake the specialist assessments.

Given the nature of the scheme and the activities that are likely to be involved during its construction and operation, the new development has the potential to result in a number of environmental effects. As a result, it is proposed that the potential effects of the project will be assessed in terms of the following EIA topics:

Discipline	Scoped in/out of EIA	
	Construction	Operation
Air Quality and Climate	✓	✓
Noise and Vibration	✓	✓
Townscape and Visual Amenity	✓	✓
Ecology	✓	✗
Geology, Soils and Contaminated Land	✓	✗
Water Quality, Hydrology and Hydrogeology	✓	✗
Archaeology and Cultural Heritage	✓	✗
Traffic and Transport	✓	✗
Socio-economic	✓	✓
Cumulative Impact	✓	✓

**Table 6-A Summary of issues to be assessed as part of the Environmental Impact Assessment**

These assessments will be presented in an Environmental Statement which will accompany the Development Consent Order application for the proposed new development. In addition to the ES the Development Order Consent will be supported by the following documents:

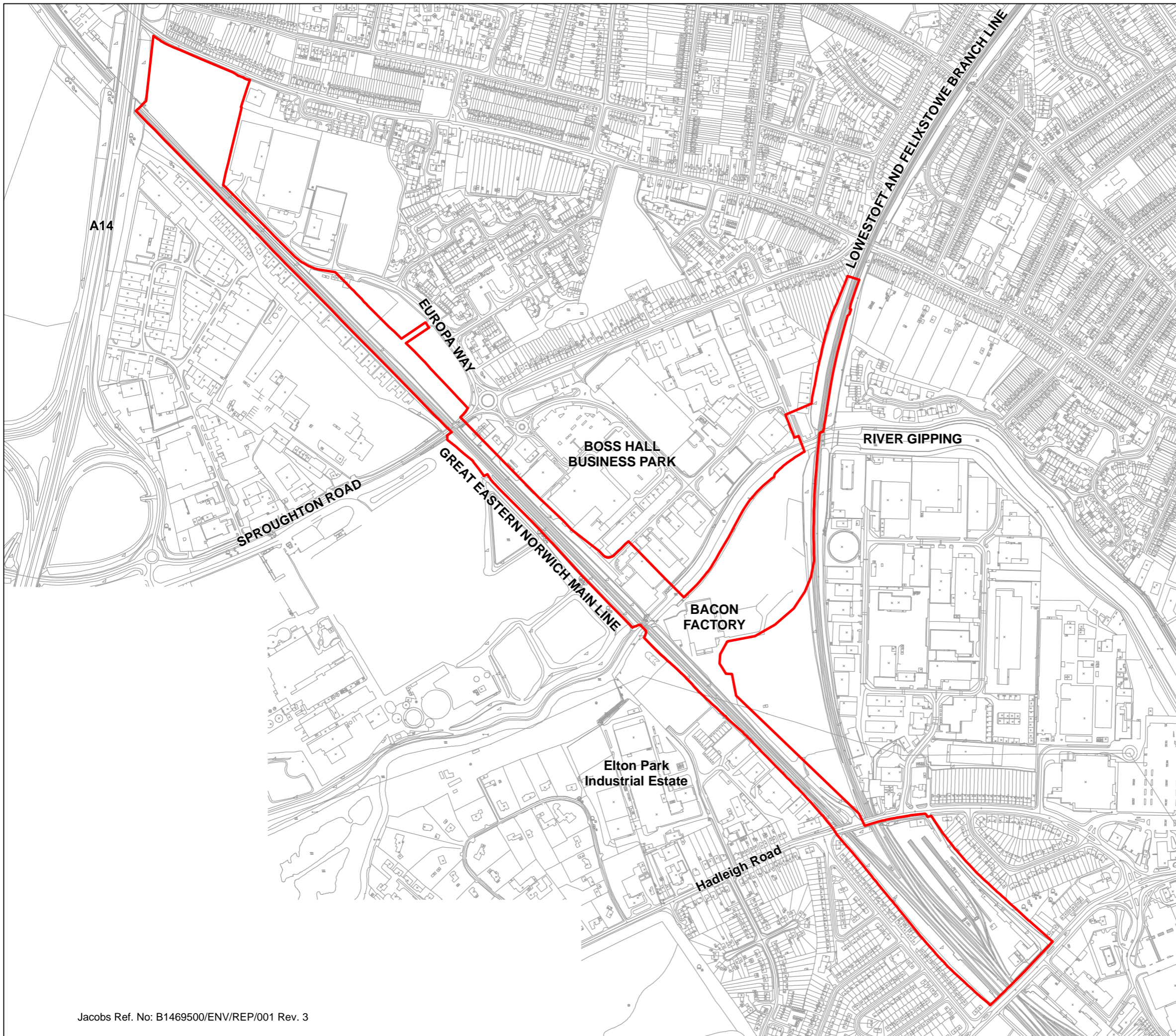
- Sustainability Statement;
- Transport Impact Assessment;
- Flood Risk Assessment; and,

- *Other planning and consultation documents as prescribed in the Planning Act 2008.*


**Appendix A - Figures**

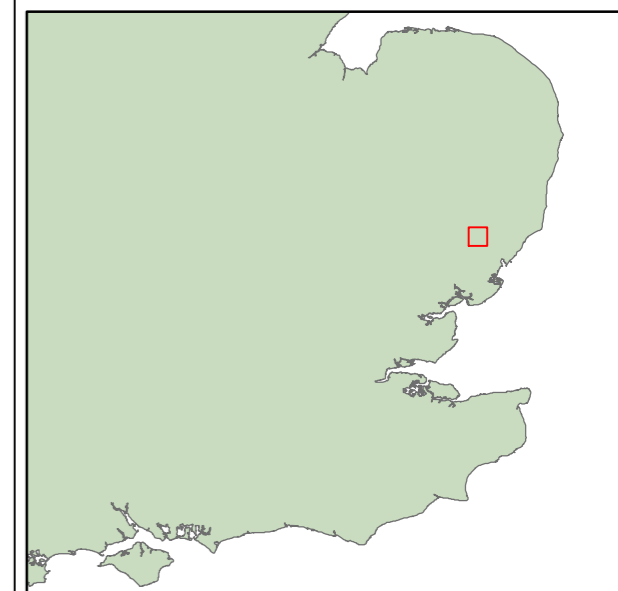


**FIGURE 01**



**Legend**

 Proposed Area of Works



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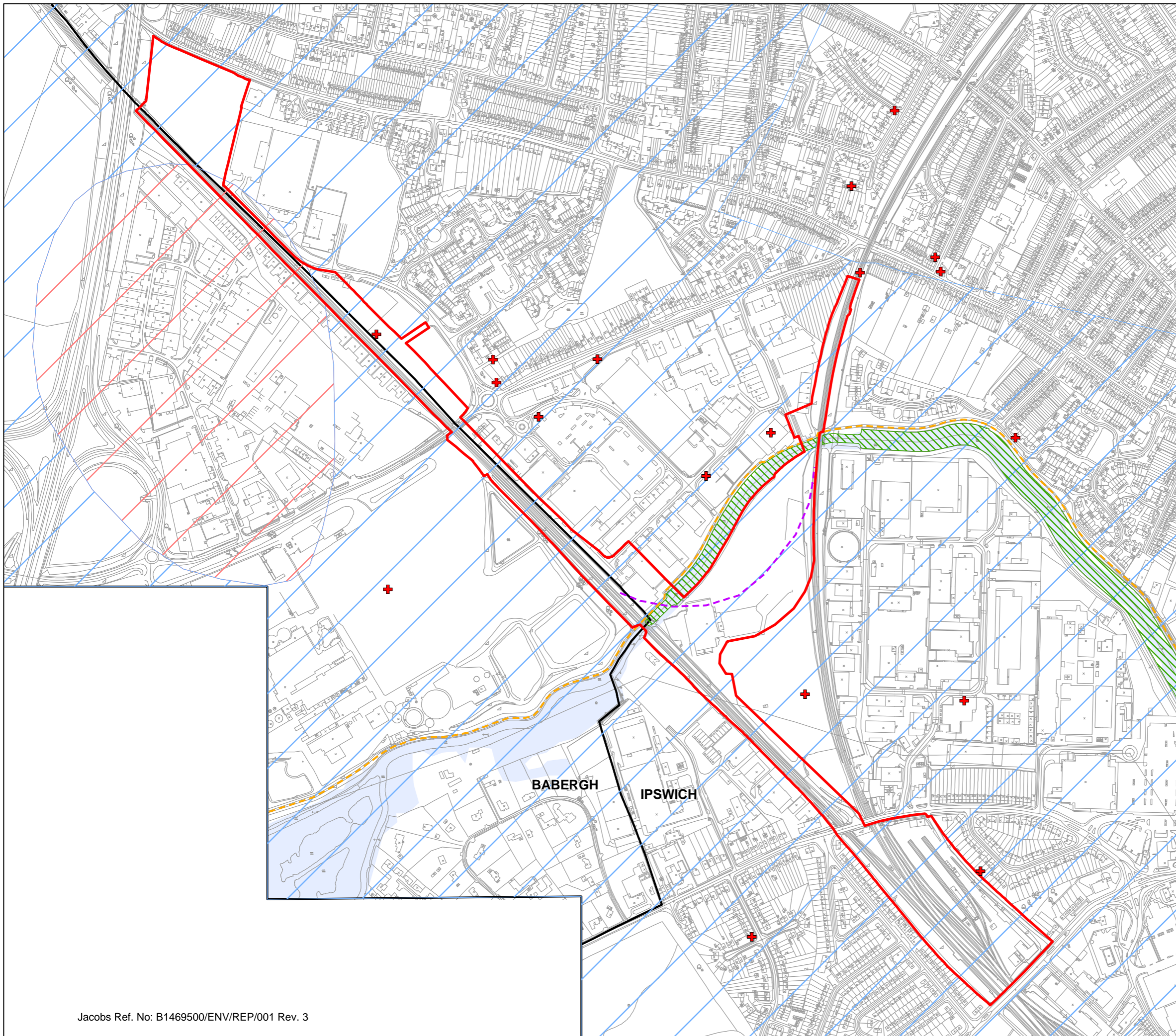


**Project** Felixstowe to Nuneaton  
Freight Capacity Enhancement Scheme  
Ipswich

**Title** Proposed Area of Works

<b>Scale</b> 1:6000 (A3)	<b>Date</b> Mar 2010	<b>Ref.</b> FTN_Ipswich_01
<b>Drawn</b> AD	<b>Checked</b> RS	<b>Approved</b> JM

**FIGURE 02**



**Legend**

- Proposed Area of Works
- + Archaeological Find Spot
- - - Proposed Chord Alignment
- - - Gipping Way Footpath
- ▨ Country Wildlife Site
- Inner Groundwater Protection Zone
- Outer Groundwater Protection Zone
- District Boundary
- EA Flood Zone 2



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**Project** Felixstowe to Nuneaton  
Freight Capacity Enhancement Scheme  
Ipswich

**Title** Environmental Features Map

<b>Scale</b> 1:6000 (A3)	<b>Date</b> Mar 2010	<b>Ref.</b> FTN_Ipswich_02
<b>Drawn</b> AD	<b>Checked</b> RS	<b>Approved</b> JM