

**Environmental Statement for Proposed  
Industrial Units**

**Enterprise Way, Whitby**

Prepared by:



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## ABBREVIATIONS

The following abbreviations are used in this Environmental Statement:

ALC	Agricultural Land Classification
AQS	Air Quality Strategy
BANEEC	Best Available Technology Not Entailing Excessive Cost
BAP	Biodiversity Action Plan
BS	British Standard
CFMP	Catchment Flood Management Plan
CRoW	Countryside and Rights of Way
CRTN	Calculation of Road Traffic Noise
DEFRA	Department for Environment, Food and Rural Affairs
DMRB	Design Manual for Roads and Bridges
EHO	Environmental Health Officer
EIA	Environmental Impact Assessment
ES	Environmental Statement
EU	European Union
HGV	Heavy Goods Vehicle
IEEM	Institute of Ecology and Environmental Management
JNCC	Joint Nature Conservation Committee
LAQM	Local Air Quality Management
LTP	Local Transport Plan
LTS	Local Transport Strategy
NNR	National Nature Reserves
NPMP	National Park Management Plan
PPC	Polyester Powder Coated
PPG	Planning Policy Guidance
PPG	Pollution Prevention Guidelines
RSS	Regional Spatial Strategy
SAC	Special Areas of Conservation
SEPA	Scottish Environmental Protection Agency
SMR	Sites and Monuments Records
SPA	Special Protection Areas
SSSI	Sites of Special Scientific Interest
SVP	Soil and Vent Pipe
TIA	Traffic Impact Assessment
TTWA	Travel To Work Area
WCA	Wildlife and Countryside Act
WHO	World Health Organisation

## **1.0 INTRODUCTION**

RPS Planning & Environment has been commissioned by Seaview Property Developments Limited to prepare this Environmental Statement (ES) to accompany a planning application submitted to North York Moors National Park Authority for the development of 13 business and industrial units at Enterprise Way, Whitby.

### **1.1 Environmental Assessment Regulations**

Under the Town and Country Planning Environmental Impact Assessment (England and Wales) Regulations 1999, a planning application may need to be accompanied by an Environmental Statement. On 17 July 2006, North York Moors Authority determined that an Environmental Statement would be required for the proposed development.

The proposed development lies within the National Park Boundary and also falls under Category 10 (a) of Schedule 2 of the Town and Country Planning Environmental Impact Assessment (England and Wales) Regulations 1999. Following discussions with North York Moors National Park Authority this ES has been commissioned in order to identify and evaluate the potential environmental impacts of the proposed development.

### **1.2 The Proposal**

It is proposed to develop 13 business and industrial units on the outskirts of Whitby. The proposed site is located to the south east of Whitby, bound to the west by Whitby Business Park and to the north, south and east by the North York Moors National Park. The location of the proposed development is illustrated in Figure 1.1.

### **1.3 The Proposed Site**

The proposed site is a 2.63 hectare greenfield site located to the east of Whitby Business Park. Much of the area surrounding the site is greenfield land, last used for grazing. Land to the west of the site is occupied by industrial units.

The proposed site is located on Enterprise Way, a single lane access road off the A171. The A171 is a single lane carriageway with filter lanes to allow dedicated access into the business park. There is a footpath to the south of the A171 but there are no pedestrian facilities along Enterprise Way. A public footpath gains access to the site at the southern corner and relatively near the northern corner. Two gateways enable access into the neighbouring agricultural field to the north east of the site.

### **1.4 Alternatives**

No other alternative sites have been identified as the proposed site is the only site zoned for Industrial Use within the North York Moors National Park area, under the North York Moors Local Plan (2003).

## 1.5 Format of the Environmental Statement

The Environmental Statement comprises two volumes:

**Volume 1 Non-Technical Summary**

**Volume 2 Environmental Statement – Main Text, Figures and Appendices**

A separate Traffic Impact Assessment (TIA) report has also been prepared to accompany the planning application and ES.

The formal requirements as to the content of Environmental Statements are set out in Schedule 4 of the Town and Country Planning Environmental Impact Assessment (England and Wales) Regulations 1999. In particular, this schedule requires that Environmental Statements should include the following:

- A comprehensive description of the development proposed;
- An outline of the main alternatives and an indication of main reasons for choice, considering environmental effects;
- A description of aspects of the environment likely to be significantly affected by the development including:
  - population;
  - fauna;
  - flora;
  - soil;
  - water;
  - air;
  - climatic factors;
  - material assets;
  - architectural and cultural heritage;
  - landscape; and
  - interactions of the above.
- A description of the likely significant effects of the development on the environment;
- A description of the measures envisaged to prevent, reduce or offset any significant adverse environmental effects;
- A summary of the above information in non-technical language; and
- An indication of any difficulties or technical deficiencies encountered when compiling the Environmental Statement.

This specified information provides a guide to the scope of the issues that should be covered when carrying out an Environmental Impact Assessment (EIA) and then in turn, reported in the environmental statement. Emphasis is placed on the "main" or "significant" effects to which a project is likely to give rise. Issues considered to be significant need to be discussed in detail in the statement. Other issues may be of little or no significance and therefore require only very brief treatment to indicate that their possible relevance has been considered.

The exact format of the ES was agreed with North York Moor National Park Authority during the scoping process.



## **2.0 PROJECT DESCRIPTION**

### **2.1 Introduction**

The following section presents an overall description of the development proposed by Seaview Property Developments Limited. Figure 2.1 provides details of the proposed site layout.

### **2.2 Location**

The proposed site is a 2.63 hectare greenfield site located to the south east of Whitby and east of Whitby Business Park. The proposed site is within the North York Moors National Park and adjacent to Scarborough Borough Council Area.

### **2.3 Description**

The proposal is for the development of 12 x 544m<sup>2</sup> industrial units and 1 x 400m<sup>2</sup> industrial unit to accommodate B1 (Business) and B2 (General Industrial) uses as defined by the Town and Country Planning (Use Classes) Order 1987 and its subsequent amendments.

### **2.4 Design Influence**

A major influence on the design of the proposed development is its location within the North York Moors National Park. Consequently, the proposed development has been designed taking into account its sensitive setting and surrounding landscape.

#### **Internal Finishes**

In order to provide potential buyers greater flexibility, the proposed development will involve construction of 13 outer shells with no specified internal layout. Soil and Vent Pipe (SVP) and Builder's Upstands have been incorporated in the design to accommodate toilet and sanitary provisions.

#### **External Finishes**

The ridgeline of the units are approximately 11.85m high. The units will be finished with cream face faced brick and slate grey wall cladding (Kingspan KS 1000 MR). The units will also be finished with light grey coloured Polyester Powder Coated (PPC) aluminium glazing and roller shutter doors. Roofing will consist of slate grey coloured composite profile steel roof sheets with louvres for potential extract.

All service and roadway areas will be surfaced with concrete and parking and pedestrian areas will be block paving.

### **2.5 Access, Layout and Parking**

The proposed site is accessed via Enterprise Way, a single lane access road off the A171. The A171 is a single lane carriageway with filter lanes to allow dedicated access into the business park. Despite no existing pedestrian or cycle facilities along Enterprise Way, a public footpath runs south of the A171.

The proposed layout has been designed to facilitate pedestrian and vehicular movement. Turning circles have also been provided for large heavy goods vehicles accessing the units.

A total of 107 car parking spaces have been provided, 1 space per 65m<sup>2</sup> gross floor area. In addition, Sheffield type cycle stands have been provided to accommodate 35 cycle parking spaces.

Dropped kerbs have also been provided to facilitate access throughout the development.

## **2.6 Landscaping and Boundary Treatment**

The existing site boundaries are relatively poorly defined. The north east boundary predominantly consists of a barbed wire fence. The south east boundary is relatively sparse and consists of scrub vegetation. The south west boundary is defined by a wooden fence. The north west boundary is relatively dense and consists of scrub-like vegetation.

Existing trees and hedges will be protected where possible and a comprehensive planting scheme with the objective of screening the site and creating attractive open space is proposed. Landscaping will be used to soften and complement the built structures and enhance the aesthetics of the proposed development. A copy of the proposed planting plan also accompanies this environmental statement (Drawing Number 0898.5.01 Rev A).

Site boundaries will be surrounded by 3m high Paladin fencing for security purposes.

### 3.0 SCOPING STUDY

#### 3.1 Introduction

The scoping study forms the first part of the Environmental Impact Assessment process and reports on preliminary consultations and the consideration of expert advice in order to identify the key environmental issues associated with a proposed development. The aim of the scoping study was to consider all key issues as early as possible including, if appropriate, the consideration of alternative site locations and alternative project options, in order to design the features of a project to take full account of pertinent environmental effects and all relevant regulatory requirements.

The basic approach of the consultation process was to be as thorough as possible including relevant statutory organisations with responsibility for the locality or which may have an interest in the proposal. The objectives of this exercise were:

- to canvas as wide a body of opinion as practicable to ensure a comprehensive coverage of local issues and/or concerns;
- to focus the study on key issues relevant to the locality; and
- to collect information held by certain bodies which is relevant and helpful in undertaking the environmental assessment.

A full list of the bodies consulted as part of the EIA scoping exercise is given in Table 3.1. The written responses received from consultees are presented in Appendix 3.1.

**Table 3.1 List of Bodies Consulted during the Scoping Exercise**

Consultee	Address
North Yorkshire Environmental Services	Area 3 – Whitby Office The Garth White Leys Estate Whitby YO21 3PD
Environmental Health Officer - Scarborough Borough Council	Scarborough Borough Council Town Hall Scarborough North Yorkshire YO11 2HG
Environment Agency	Dales Area Office Coverdale House Amy Johnson Way York YO3 4UZ
English Nature - North & East Yorkshire Team	Genesis 1 University Road Heslington York YO10 5ZQ
North York Moors National Park Authority - Ecologist	North York Moors National Park Authority The Old Vicarage Bondgate Helmsley York YO62 5BP

<b>Consultee</b>	<b>Address</b>
North York Moors National Park Authority - Planner	North York Moors National Park Authority The Old Vicarage Bondgate Helmsley York YO62 5BP
North Yorkshire County Council	County Hall Northallerton North Yorkshire DL7 8AH
North York Moors National Park Authority - Archaeologist	North York Moors National Park Authority The Old Vicarage Bondgate Helmsley York YO62 5BP

Taking account of the environmental appraisals undertaken and the consultations held with all relevant bodies, it was possible to identify all potentially significant effects to which the project is likely to give rise.

## 4.0 POLICIES AND PLANS

### 4.1 Introduction

This section provides a review of planning policy as contained in the relevant regional and development plan policy in relation to the proposed development.

The proposed development falls within Class B1 (Business) and Class B2 (General Industrial) of the Town and Country Planning (Use Classes) Order 1987 and its subsequent amendments.

### 4.2 Methodology

A review of planning policy for the area has been undertaken using the following key documents:

- The Yorkshire and Humber Plan – Draft Regional Spatial Strategy (2005);
- North York Moors National Park Management Plan (1998);
- North York Moors National Park Management Plan Review (2004);
- North York Moors Local Plan (2003);
- Scarborough Borough Local Plan (1999);
- The Local Development Framework for the North York Moors (currently being prepared);
- Core Strategy and Development Policies Preferred Options North York Moors Local Development Framework (2006);
- Planning Policy Guidance Note 4: Industrial, Commercial Development and Small Firms (1992);
- Planning Policy Statement 7: Sustainable Development in Rural Areas (2004); and
- North Yorkshire County Council: Local Transport Plan (2006-2011).

### 4.3 Baseline Conditions

#### Planning Policy

With the exception of National Parks, planning powers in Great Britain generally lie with local councils. The North York Moors National Park Authority is the local planning authority for the North York Moors and is therefore responsible for preparing, monitoring and reviewing all planning policies and controlling all development in the National Park, which require planning permission.

The Policy Team at the North York Moors National Park Authority bring together all of the government guidelines and strategic plans and formulate policies which the Authority and other agencies with an interest in the North York Moors use to inform planning decisions. These are published in the National Park Management Plan.

#### The Yorkshire and Humber Plan - Draft Regional Spatial Strategy, 2005

The Regional Spatial Strategy (RSS) is currently being produced by the Yorkshire and Humber Regional Assembly and was published in draft form for consultation in December 2005. It springs from Government legislation that states each region of England should have its own plan spatial strategy setting out a framework for its future development. This plan, currently in draft form, is the "Regional Spatial Strategy for Yorkshire and the Humber Region".

The strategy provides frameworks for determining applications, as well as preparing both local development documents and local transport plans.

The plan sets out the scale, priorities and broad locations for development in the region over the period to 2021. It provides a framework for what should happen and where. The RSS includes a regional transport strategy, and links issues such as the environment, sustainable development and quality of life.

Specific objectives of the RSS of relevance to the proposal include:

- Regenerating areas damaged by past industrial decline as well as capitalising on economic growth points;
- Recognising and responding to the needs of urban and rural communities; and
- Making the best use of existing infrastructure and services.

Section 4 of the RSS outlines the Core Approach of the plan. This section sets out overall regional policies to give cohesion and direction to the Yorkshire and Humber Plan – Draft Regional Spatial Strategy, including:

- Reverse the long term trend of population and investment dispersal away from the Region's cities and major towns;
- Transform cities and major towns in the Region as attractive places where people want to live, work and invest in;
- Support the roles of market towns as the local development and service focus for meeting needs in rural areas;
- Diversify urban and rural economies and help deliver a better performing and more competitive economy;
- Achieve a focus of development and investment to better connect with excluded communities and areas requiring regeneration;
- Improve accessibility and increase the use of public transport;
- Raise environmental quality and pro-actively respond to the global and local effects of climate change; and
- Maintain the existing strategic extent of Greenbelts in the Region.

The RSS adopts a 'sub area' approach to provide a functional basis for spatial planning across the region providing a framework for responding to the issues and characteristics of different parts of the Region. Whitby is located within the Coast sub area.

Despite a strong interdependence with larger inland cities, the Coast sub area shares a number of unifying features. These include:

- A pattern of local economies and settlements with most centres facing challenges to historic roles as service centres and structural changes to main historic functions, including towns and agriculture, fishing and niche manufacturing and economic activities;
- Unique and important assets; and
- Weak connectivity arising from remoteness and peripherality.

The sub area has a population of about 160,000, approximately 3% of the regional total. The coastline is punctuated by a number of settlements, including Whitby, which is recognised as a Principal Service Centre, designating the area as the main local focus for housing, employment, shopping, leisure, education, health and cultural activities and facilities.

The coast sub area has a significantly greater proportion of smaller older households than the regional average. The ageing population, and nature of the local economy, is reflected in economic activity rates lower than the regional average.

Scarborough, and particularly Whitby, are adjoined by areas of environmental designation and are largely confined by local topographic features. Their local settings, built form and historical features make them outstanding regional assets.

Policy approaches for the sub area focus on strengthening and diversifying local economies, utilising and strengthening its unique, natural and man-made assets and minimising its relative remoteness. Implementing the plan's core approach at the scale of the Coast sub area means that most new development should be focussed on the Scarborough urban area, with supporting growth at Bridlington and smaller scales of development at Whitby.

Sub area policy C1 states that all plans, strategies, investment decisions and programmes for the Coast sub area will, where relevant, seek to:

- Develop the Principal Service Centre roles of Bridlington and Whitby;
- Diversify the sub areas economic base, opening up new employment land opportunities, with new tourism and other employment generating development and major new infrastructure at Scarborough and Bridlington which avoids undue damage to the protected nature of much of the sub area; and
- Restrict development in and around Whitby to safeguard its particular historic urban form and setting.

Section 14 of the RSS addresses the economic issues and highlights the following priorities:

- Securing more competitive economic conditions by promoting the characteristics of a modern and successful economy (Policy E1);
- Strengthening the role of existing city and town centres by making them the main focus for office, retail, health, education, leisure, cultural, public/business services and other intensive uses (E2);
- Providing sufficient land in sustainable locations to meet the needs of a modern economy (E3);
- Supporting for the delivery of RES objectives for the growth of priority economic sectors and clusters (E4);
- Safeguarding employment land from loss to other uses such as housing in specific locations (E5);
- Promoting the role and development of tourism in the region in a sustainable manner (E6); and
- Supporting the diversification and strengthening of the rural economy (E7).

#### **North York Moors National Park Management Plan, 1998**

The National Park Authority was originally required to produce a National Park Plan under the 1972 Local Government Act. The initial Plan for the North York Moors was published in 1977, followed by the First Review in 1984 and the Second Review in 1991.

The 1995 Environmental Act replaces National Park Plans with National Park Management Plans (NPMP). The Act requires National Park Authorities to prepare and publish NPMPs to formulate policies for managing the Park and carrying out National Park Authority functions in relation to the Park. The NPMP should be reviewed at least every five years.

The current Management Plan was produced in 1998 and reviewed in 2004. The Plan contains over 130 objectives, covering a wide range of issues of relevance to the development of planning policies.

The role of National Park Management Plans is to:

- "set out strategic objectives and policies for achieving Park purposes to guide all the NPA's decisions and the actions of others; explain the reason for those objectives; and
- promote an integrated approach to managing the Park area, across all the functions of the NPA and other agencies, encouraging co-operation and partnership".

Section 7.3 of the National Park Management Plan relates to Employment and the Local Economy. The economy of the National Park is dominated by the traditional industries of agriculture and forestry and increasingly by the growth in tourism. A large part of the economic activity is based on very small businesses of which a high proportion are self-employed.

Many of the residents of the National Park commute to employment in the towns and urban areas outside the Park. The environment of the Park also makes the North York Moors a popular location for people to move into the area and commute to their workplace outside the area.

Levels of unemployment amongst residents of the park vary significantly in particular areas. While levels in the west and south of the Park are low, levels are traditionally higher along the coast and particularly within the Whitby Travel to Work Area (TTWA).

A number of Objectives of the plan are relevant to this proposal. These include:

Economic Objective 1 aims to

“develop and maintain partnership programmes that support rural communities and businesses in the National Park in providing for local employment and economic needs”.

Economic Objective 2 aims to

“encourage the provision of employment opportunities for local people within the National Park and giving particular support to employment which relates to and furthers National park purposes”.

In amplification Economic Objective 2 states that

“in considering the relationship between employment opportunities and National Park purposes it is appropriate to give particular support to employment which relates to and furthers those purposes. A significant sector of employment opportunities neither relates to nor furthers Park purposes; equally neither does it adversely affect the two purposes. The provision of such employment opportunities for local people is encouraged by the local economic development agencies and assists in furthering the sustainability of communities within the National Park. The provision of new jobs in villages within the Park also reduces the necessity for local people to commute to jobs in the towns and urban centres outside and remote from the National Park”.

(Paragraph 13, Chapter 7.3 Employment and the Local Economy)

Economic Objective 3 aims to

“ensure that existing industrial and business land and buildings remain in such use where problems are not being caused and to promote the provision of new workspaces at an appropriate scale for local communities, including through the reuse of existing buildings”.

In amplification Economic Objective 3 of the Management Plan states

“the provision of workspace provides one of the best opportunities for widening the rural employment base and for creating jobs. It is, however, extremely difficult to identify and develop new sites for employment purposes within villages. It is important therefore to ensure that land and buildings that are in, or were previously in, employment use are retained for such uses in the future as long as they are not having an adverse effect on local people living nearby or on conservation objectives”.

(Paragraph 14, Chapter 7.3 Employment and the Local Economy)

Further the plan states that

“a range of size and type of property is important to provide a ‘ladder’ for successful businesses as they grow. The provision of larger premises can be a particular problem within both villages and the countryside. A lack of appropriate local premises results in either businesses being constrained in their development or having to move away to other locations”.

(Paragraph 17, Chapter 7.3 Employment and the Local Economy)

Economic Objective 4 aims

“to safeguard the level of business activity, encourage the establishment of new businesses and promote diversification of the economy, and giving particular support to business opportunities which accord with sustainability principles and National Park purposes”.



In amplification Economic Objective 4 states that

“the encouragement of the creation, development and growth of competitive businesses in North Yorkshire is the second goal of the North Yorkshire Economic Development Strategy. The provision of employment opportunities for local people within the National park is dependant on the safeguarding of existing businesses and the establishment of new businesses”.

(Paragraph 19, Chapter 7.3 Employment and the Local Economy)

### **North York Moors National Park Management Plan Review, 2004**

The updated objectives and contextual updates in the North York Moors National Park Management Plan Review should be read as a companion to the 1998 Management Plan, rather than a replacement. The unchanged remainder of the 1998 Plan remains in place. The changes have been developed in consultation with a range of stakeholders who have contributed to the review process, which began in December 2003, and was formally endorsed by the National Park Authority in September 2004.

Section VI of the North York Moors National Park Management Plan Review relates to Development and Community Needs. This section covers topics including 'Planning and Sustainable Development' and 'Employment and the Local Economy'.

Under the heading of Planning and Sustainable Development the plan outlines the following key objectives:

#### Planning & Sustainable Development Objective 1:

“To ensure that development accords with National Park purposes and respects the special qualities of the National Park; incorporates principles of sustainability; and promotes the development of sustainable communities, through fostering the economic and social well being of local communities”.

#### Planning & Sustainable Development Objective 2:

“To ensure that new development is of a high quality that enhances the character and special qualities of the National Park and respects local distinctiveness”.

#### Planning & Sustainable Development Objective 5:

“To ensure that local communities in the National Park have the opportunity to take advantage of developments in new information technology and telecommunications but at the impact of the infrastructure associated with these technologies in the landscape and built environment is minimised”.

### **North York Moors Local Plan, 2003**

Section 54A of the Town and Country Planning Act 1990 (inserted by section 26 of the Planning and Compensation Act 1991) requires planning decisions to be made in accordance with the development plan unless material considerations indicate otherwise. Up-to-date and relevant plans are essential if the development needs of commerce and industry are to be met, and reconciled with demands for other forms of development and for the protection of the environment. Development plans should give industrial and commercial developers and local communities greater certainty about the types of development that will or will not be permitted in a given location.

Chapter 2 of the local plan sets out the strategic framework for the plan. The policies in the Local Plan provide a framework to assist in moving towards a more sustainable future for the National Park's environment, economy and communities. The Local Plans policies need to guide and control development so as to provide for the needs of local communities whilst safeguarding, and where possible enhancing, the natural and built environment in the North York Moors. Most development will be expected to be located within existing settlements.

Policy GP3: General Development Policy states that

“development which accords with other relevant policies in this plan will be permitted where:

- The design of the scheme respects or enhances the character, special qualities and distinctiveness of the locality and wider landscape;
- The nature of the proposal in terms of the type of use and level of activity, either individually or cumulatively, would not have an unacceptable impact upon the character, special qualities and distinctiveness of the locality and wider landscape, public amenity, the operation of surrounding landuses, or any interest of acknowledged importance;
- The proposal provides safe and convenient access for all, and is of a scale which the existing road network can serve safely, and provides means of access to the highway network and car parking provision in line with standards adopted by the National Park Authority; and
- Services can be provided without unacceptable impact, either individually or cumulatively, on the character, special qualities and distinctiveness of the locality and wider landscape, or other service users, and the proposal incorporates measures that prevent any unacceptable levels of pollution”.

Chapter 3 of the Local Plan contains policies aimed at conserving and enhancing those habitat and wildlife resources, which are significant and integral to the character, special qualities and distinctiveness of the landscape and area of the National Park. All policies in the plan aim to accommodate development whilst conserving or enhancing the landscape and it is within this wider context that proposals for development associated with these land uses will be considered.

Chapter 4 of the local plan contains policies to conserve and enhance the distinctive cultural heritage of the National Park.

Conservation and enhancement of the cultural heritage of the area forms part of the first statutory purpose of National Parks. The North York Moors is a living and working place and it is important that the local plan integrates the need for development with this purpose. It is equally important that the plan recognises that cultural heritage is added to and evolves over time and that variety can be enriched as well as conserved for future generations.

The development plan recognises that new development today represents the cultural heritage of future generations. It should always be of the highest quality. Moreover, the design of new development represents an opportunity not simply to replicate the past, but to stimulate and provide more innovative, modern design which can have a lower impact on the environment and the worlds resources. The encouragement of good innovative modern design will add variety and interest to the National Park’s Cultural Heritage by enhancing and enriching it over time.

Policy BE6 Design of New Development states the following:

“Proposals for new development or extensions to existing development will only be permitted where they are considered to respect or enhance the character of the surrounding streetscape, landscape or host building and are of a high standard of design. In particular proposals should:

- Be sited so as to respect and conserve the character of the built environment and wider landscape;
- Be compatible with neighbouring buildings in terms of scale, height, massing, orientation, layout and density and residential amenity;
- Ensure that detailing in traditional designs reflects or complements the traditional detailing of local buildings and that building materials are appropriate to the locality;
- Ensure a satisfactory landscaping scheme (which complies with the criteria of Policy BE10) forms an integral part of the proposal; and
- Retain, enhance and/or create open space, views, landmarks, vegetation and townscape features that contribute to the character and quality of the area.

Policy BE10 Landscaping states:

“development proposals will, where appropriate, be required to incorporate a suitable landscaping scheme and will only be permitted where the scheme:

- Is planned as an integral part of a development;
- Is appropriate to the character of the surrounding locality; and
- Ensures safe and convenient access for all, including those with mobility problems.

In addition, schemes will be required to:

- Retain important natural habitats and features and hard landscaping features of landscape, amenity, nature conservation or historical value; and
- Be designed with indigenous species appropriate to the locality and, include measures to establish new habitats and/or suitable elements of hard landscaping, where appropriate”.

Chapter 7 of the local plan discusses the economy. The general approach of the local plan will be to provide economic opportunities for people living in the park by the development of local employment which will involve encouraging new employment sites and protecting and expanding existing employment sites in ways which do not have an adverse impact on the park. Attracting businesses into the park will also be important because, although jobs may initially be taken by people from outside the park, in the longer term a more diversified local economy will provide greater choice and opportunity for park residents.

Policy E1 relates to New Buildings. This states that

“new small scale economic development falling within Use Classes B1 or B2 will be permitted, in locations in or on the edge of villages where:

- Other suitable accommodation is not already available in the immediate area; and
- The proposal conforms with the provisions of Policy GP3”.

The proposed development has been designed to conform to the provisions of Policy GP3 as set out earlier in this section.

Policy E8 relates specifically to the development of a Business Park at Whitby. This states

“the development of land for industrial purposes falling within Use Classes B1 and B2 will be permitted adjacent to the Whitby Business Park within the area indicated on the Proposals Map. Proposals should have regard to their location within a National Park through their design and landscaping”.

The proposed development is therefore in line with the policies of the North York Moors Local Plan as the development site is located within this zoning, adjacent to the existing Whitby Business Park, as indicated on the proposals map.

The development is also the only industrial zoning within the National Park Boundary.

In amplification the plan states that:

“unemployment is higher in the coastal area than the rest of the National Park and this effect is even greater in Scarborough and Whitby. The two towns are, therefore, two of the most important focuses of economic development for Scarborough Borough Council. In the case of Whitby the town is closely surrounded by the National Park. This situation, together with the topography of the land around Whitby, restricts the areas available for economic development. The National Park boundary runs through the industrial estate, which was adjacent to the A171 to the south of Whitby. This places land developed for industrial premises and land where future employment development is expected to take place within the National Park. Development of this scale is usually not acceptable in the Park, but given

Whitby's situation and the historical commitment to the development arising from the joint 1983 Whitby Local Plan, an exception can be justified. [Note: The 1983 Whitby Local Plan zoned the proposed development area as industrial land]. The area within which further development of the estate will be permitted is indicated on the proposal map, and consists of two parcels of land with a combined area of 7.49 hectares. As this will fall within the National Park it is expected that any proposal would take account of this fact in the design and landscaping of this development".

Chapter 9 of the North York Moors Local Plan addresses transport issues. The plan aims to increase the opportunities available to both residents and visitors in terms of the opportunities for transport available and the quality of services. In providing for the transport needs of visitors and residents, the local plan needs to take a flexible approach, one that will ensure adequate provision for car use for the residents of the park and one that encourages the use of alternative means of transport wherever possible. Only by adopting this dual approach will the needs of the park be met at the least cost to the environment.

The following policies are of relevance to the proposal,

Policy T1: Accessibility states that:

"proposals should demonstrate that the design of the scheme has taken into account the access needs of all".

Policy T5: Provision of access for pedestrians, cyclists and equestrians. This states that:

"the external design and layout of development proposals and associated surfacing works should, where appropriate, take into account the needs of pedestrians, cyclists and equestrians".

Policy T9: Parking Requirements states:

"all development proposals should make provision for the parking of vehicles, including cycles and motorcycles, in accordance with the relevant maximum standards adopted by the National Park Authority. Parking facilities for motor vehicles in excess of the standards will not be permitted".

### **Scarborough Borough Local Plan**

The Scarborough Borough Local Plan covers the whole of Scarborough Borough outside the North York Moors National Park. The Borough Local Plan was statutorily adopted on 3 April 1999.

The Plan has two main purposes:

- to set out the Borough Council's policies for the control of development; and
- to make proposals for the development and use of land and to allocate land for specific purposes.

The site of the proposed development is located just outside the Local Plan Area Boundary.

Policy E.27 "The Protection of Significant Views" is of relevance to the proposed development. This designation lies within the Scarborough Borough Local Plan to the north west of the proposed development.

This policy states that

"subject to compliance with other plan policies development will be permitted provided that views of and from the area's important landscape and townscape features will not be adversely affected. Special scrutiny will be applied to proposals affecting views of and from the North York Moors fringe, the Wolds, the coastal zone, Oliver's Mount and the designated conservation areas".

### **Local Development Framework for the North York Moors**

The North York Moors National Park Authority is currently working on its Local Development Framework which will replace the North York Moors Local Plan. The Local Development Framework will address a wide range of issues surrounding future development within the National Park. The Local Development Framework is also required to conform with policies contained within the Regional Spatial Strategy.

The Local Development Framework will consist of a number of Development Plan Documents (DPDs). DPDs include the Core Strategy and Development Policies document, which will incorporate the strategic policies for all new developments in the National Park. The consultation period for the Preferred Options stage of the Core Strategy and Development Policies document finished on 21<sup>st</sup> April 2006.

### **Core Strategy and Development Policies Preferred Options North York Moors Local Development Framework March 2006**

This document sets out the 'Preferred Options' that the National Park Authority considers should form the basis for future spatial planning in the North York Moors National Park. It is a key part of the developing Core Strategy and Development Policies document that will, on completion, form a significant part of the Local Development Framework which will govern the operation of the planning system in the North York Moors National Park.

This document comes in two distinct parts. The first part provides the overall context within which the North York Moors Core Strategy must operate including the key local issues and the other strategies that must be taken into account in shaping the policies that will operate within the National Park. The second part comprises the proposed policy framework – in essence the response to the issues raised in the preceding sections.

Future decisions on planning applications will be based upon the policies in the finalised version of the Core Strategy and Development Policies.

The following policies are of relevance.

Core Policy 3 indicates the preferred policy approach with regards to Development in the Countryside. This states that the

“range of development types that will be permitted in locations outside towns and villages, provided they are in accordance with other detailed policies in the Local Development Framework is as follows... small scale economic development on the edge of settlements”.

Core Policy 22 highlights the preferred policy approach for the Economy. This states that

“there is an opportunity to create and meet local employment opportunities and needs at a scale and type appropriate to the locality”.

### **Planning Policy Guidance Note 4: Industrial, Commercial Development and Small Firms (November 1992)**

Planning Policy Guidance 4 (PPG4) takes a positive approach to the location of new business developments and assisting small firms through the planning system. The main message is that economic growth and a high-quality environment have to be pursued together.

PPG4 states that the

“Government’s key aims is to encourage continued economic development in a way which is compatible with its stated environmental objectives. Economic growth and a high quality environment have to be pursued together”.

Paragraph 13 states that the planning system

“should operate on the basis that applications for development should be allowed, having regard to the development plan and all material considerations, unless the proposed development would cause demonstrable harm to interests of acknowledged importance. Development control should not place unjustifiable obstacles in the way of development which is necessary to provide homes, investment and jobs, or to meet wider national or international objectives. Nevertheless planning decisions must reconcile necessary development with environmental protection and other development plan policies”.

Paragraph 16 indicates that in rural areas,

“applications for development necessary to sustain the rural economy should be weighed with the need to protect the countryside in terms of, for example, its landscape, wildlife, agriculture, natural resources and recreational value. Detailed advice on industrial and commercial development in the countryside, including National Parks and Areas of Outstanding Natural Beauty, is given in PPG7 the Countryside and the Rural Economy”.

[Note: PPG7 has been replaced by PPS7, which contains advice on industrial and commercial development in the countryside].

Paragraph 17 of PPG4 states that:

“where they are disposed to permit industrial or commercial developments in residential and rural areas, planning authorities should bear in mind that subsequent intensification of the use may become unacceptably intrusive. Unless it amounts to a material change in the character of the use, intensification cannot be controlled if unconditional planning permission has been granted. Planning authorities should, therefore, consider the use of planning conditions or planning obligations to safeguard local amenity, where they would be an appropriate means of preventing foreseeable harm”.

#### **Planning Policy Statement 7: Sustainable Development in Rural Areas (August 2004)**

Planning Policy Statement 7 (PPS7) replaces Planning Policy Guidance (PPG) Note 7, The Countryside – Environmental Quality and Economic and Social Development.

PPS 7 sets out the Governments Objectives for rural areas that are relevant to the Planning Policy Statement. Of relevance to the proposed development are:

- To raise the quality of life and the environment in rural areas through the promotion of:
  - “Sustainable economic growth and diversification;
  - Good quality, sustainable development that respects and, where possible, enhances local distinctiveness and the intrinsic qualities of the countryside”.
- To promote more sustainable patterns of development:
  - “Focusing more development in, or next to, existing towns and villages;
  - Discouraging the development of ‘greenfield’ land, and, where such land must be used, ensuring it is not used wastefully”.
- Promoting the development of the English regions by improving their economic performance so that all are able to reach their full potential – by developing competitive, diverse and thriving rural enterprises that provides a range of jobs and underpins strong economies.

PPS 7 states that planning policies in Regional Spatial Strategies (RSS) and Local Development Documents (LDD’s) should facilitate and promote sustainable patterns of development and sustainable communities in rural areas. This should include policies to sustain, enhance and, where appropriate, revitalise country towns and villages (including through the provision of affordable housing) and for strong, diverse, economic activity, whilst maintaining local character and a high quality environment.

Paragraph 3 of PPS 7 discusses the location of development. This states that

“away from larger urban areas, planning authorities should focus most new development in or near to local service centres where employment, housing (including affordable housing), services and other facilities can be provided close together. This should help to ensure these

facilities are served by public transport and provide improved opportunities for access by walking and cycling. These centres (which might be a country town, a single large village or a group of villages) should be identified in the development plan as the preferred location for such development”.

#### **North Yorkshire County Council: Local Transport Plan 2006-2011**

The North Yorkshire Local Transport Plan (LTP) was published in March 2006. It sets out the aims and objectives for transport in North Yorkshire for the next ten to fifteen years and the strategies and policies to deliver them over the five-year period 2006-2011.

A requirement of the LTP is that it supports a longer term (10 to 15 years) Local Transport Strategy (LTS). The LTS sets out how transport can contribute towards achieving the wider National, Regional and local vision for the future of the county. The LTS reflects this vision for the future as set out in a number of other policy documents including the Regional Spatial Strategy that is prepared by the Yorkshire and Humber Assembly.

The Vision, Aims and Objectives of the LTS and, therefore also the LTP, are set out below:

**Vision:** “Better access and sustainable communities for all”. The vision reflects the philosophy that transport is primarily a means of people accessing the services that they require and that most of those services can be provided in local communities.

**Aims:** “To make North Yorkshire a better place by:

- Providing equality of opportunity for all;
- Protecting and enhancing the environment;
- Improving the safety and health of residents and visitors;
- Increasing economic prosperity;
- Building sustainable communities; and
- Reducing the need and demand for travel.

## **4.4 Impact Assessment**

### **Assessment of Construction Effects**

The proposed development is in line with Policy E8 of the North York Moors Local Plan. This policy relates specifically to the proposed development site and states “the development of land for industrial purposes falling within Use Class B1 and B2 will be permitted adjacent to the Whitby Business Park within the area indicated on the proposals map”.

In addition to Policy E8 of the North York Moors Local Plan, the proposed development also conforms to Policy GP3. This General Development Policy states that development which accords with other relevant policies in the plan will be permitted where the design of the scheme respects the locality; the nature of the proposal would not have an unacceptable impact; and the proposal provides safe and convenient access for all.

The proposed development has been designed in order to conform to the requirements of Policy BE6 and BE10 of the local plan regarding siting, scale, detailing, materials and landscaping. In addition, the proposed development has been designed to take account of the accessibility requirements of Policies T1, T5 and T9.

As a result of the proposal conforming to Policies BE6 and BE10, and General Development Policy GP3, the proposed development also complies with Policy E1 which states that “new small scale economic development falling within Use Class B1 or B2 will be permitted, in locations in or on the edge of villages”.

In addition to complying with local plan policies the proposal also complies with policies contained within the North York Moors National Park Management Plan, and the Draft Regional Spatial Strategy.

The proposed development complies with Economic Objective 1, 2, 3 and 4 of the North York Moors National Park Management Plan 1998. These aim to “encourage the provision of employment opportunities for local people”, “ensure that existing industrial and business land and buildings remain in such use”, and to “safeguard the level of business activity, encouraging the establishment of new businesses”.

Finally, the proposed development complies with Objective A of the Draft Regional Spatial Strategy. This policy aims to regenerate areas damaged by past industrial decline as well as capitalising on economic growth points.

During the construction phase, however, there will be a requirement to ensure that construction methods do not impact on other development plan policies, such as the requirement to conserve and enhance wildlife resources and the natural environment. These potential impacts are discussed in greater detail in the ecology section.

It is not envisaged that the proposed development, during the construction phase will have any adverse impact on any of the policies and objectives contained within the North York Moors Local Plan or on any of the policies and objectives of the various other plans of relevance in the area.

#### **Assessment of Operational Effects**

There will be no adverse impact on Development Plan policies as the proposed development is in line with policy E8 of the North York Moors Local Plan. This policy relates specifically to the proposed development site and the use classes proposed.

#### **4.5 Mitigation**

Mitigation measures should ensure that there is no adverse effect on wildlife resources and the natural environment during the construction phase. These have been discussed in Section 7.0 Ecology and Nature Conservation.

A detailed planting plan has been prepared to accompany the planning application and Environmental Statement (See drawing 0898.5.01 Rev A).

#### **4.6 References**

The Yorkshire and Humber Plan – Draft Regional Spatial Strategy

North York Moors National Park Authority (1998) North York Moors National Park Management Plan, Falcon Press.

North York Moors National Park Management Plan Review

North York Moors Local Plan

The Local Development Framework for the North York Moors

Planning Policy Guidance Note 4: Industrial, Commercial Development and Small Firms

Planning Policy Statement 7: Sustainable Development in Rural Areas

North Yorkshire County Council: Local Transport Plan 2006-2011.



## 5.0 SOCIO ECONOMIC AND HUMAN ENVIRONMENT

### 5.1 Introduction

This section of the ES examines the existing conditions and potential impacts in relation to the socio-economic and human-environment, and provides an assessment of existing conditions, the likely impacts of the development and potential mitigation measures.

### 5.2 Assessment Methodology

This section examines the relevant characteristics and trends of the local population in terms of age, sex and socio-economic status.

Data on existing infrastructure, properties, schools, hospitals, services, community facilities, shops etc, have also been examined.

This information has been gathered through desktop analysis of the 2001 Census data (Source: National Statistics Website: [www.statistics.gov.uk](http://www.statistics.gov.uk)) and field survey work.

### 5.3 Existing Baseline Conditions

#### Land Use

Whitby is a historic town in North Yorkshire on the north-east coast of England with a population of approximately 14,000. It is situated 47 miles from York, at the mouth of the River Esk and spreads up the steep sides of the narrow valley carved out by the river's course.

The town is served by Whitby railway station, which forms the terminus of the Esk Valley line from Middlesborough.

The town is an important fishing port and tourist attraction.

The site is located on the edge of Whitby town, on a greenfield site to the east of Whitby Business Park. To the north, south, and east the site is surrounded by agricultural land, part of which lie within the North York Moors National Park. Individual dwellings (mainly farm dwellings) are dispersed throughout the agricultural land, and are mainly located off Hawsker Lane. A number of caravan parks, reflecting the tourism importance of the town, are also dispersed throughout the study area, again mainly located off Hawsker Lane.

Nearby schools included Eskdale School and East Whitby Community Primary School at Stainsacre Lane and Hawsker cum Stainsacre Church of England Voluntary Controlled Primary School which is located approximately on Hawsker Lane.

All Saints Church located approximately 1.0km to the east of the site on Summerfield Lane.

A pedestrian path runs from the A171, past the eastern boundary of the site, to link up with pathway networks that cross the wider study area, eventually linking into the Cleveland Way. The Cleveland Way is 109 miles (176km) in length starting from the market town of Helmsley. The route heads across the heather moorland of the North York Moors before reaching the coast at Saltburn. From Saltburn the Cleveland Way continues along the North Yorkshire coastline to Filey.

#### Socio-economic

The site is situated within the Fylingdales Ward within the Scarborough Non-Metropolitan District of North Yorkshire County.

Table 5.1 shows a detailed breakdown of the population of the Fylingdales Ward, Scarborough Non-Metropolitan District, Yorkshire and the Humber Region and England.

**Table 5.1 Population Breakdown**

	<b>Fylingdales Ward</b>	<b>Scarborough Non-Metropolitan District</b>	<b>Yorkshire and The Humber Region</b>	<b>England</b>
Population	2,252	106,243	4,964,833	49,138,831
Male	1,083	50,374	2,411,944	23,922,144
Female	1,169	55,869	2,552,889	25,216,687
Area of Admin Geography	6,636ha	81,654ha	1,540,757ha	13,027,872ha
Population Density	0.34	1.3	3.22	3.77

Source: National Statistics Website: [www.statistics.gov.uk](http://www.statistics.gov.uk)

As shown in Table 5.1 Fylingdales Ward has a relatively small population and a low population density when compared to Scarborough Non-Metropolitan District and the Yorkshire and Humber Region.

**Table 5.2 Age Structure**

	<b>Fylingdales Ward</b>	<b>Scarborough Non-Metropolitan District</b>	<b>Yorkshire and The Humber Region</b>	<b>England</b>
All People	2,252	106,243	4,964,833	49,138,831
People aged 0-4	67	5,058	292,030	2,926,238
People aged 5-7	60	3,401	188,984	1,838,668
Population aged 8-9	58	2,566	132,970	1,283,861
Population aged 10-14	176	7,010	336,487	3,229,047
Population aged 15	45	1,364	65,077	623,767
Population aged 16-17	82	2,597	127,281	1,231,266
Population aged 18-19	39	2,141	127,629	1,177,571
Population aged 20-24	68	4,782	303,906	2,952,719
Population aged 25-29	62	5,188	309,055	3,268,660
Population aged 30-44	364	20,502	1,094,671	11,127,511
Population aged 45-59	589	22,383	940,192	9,279,693
Population aged 60-64	141	6,503	247,900	2,391,830
Population aged 65-74	231	11,439	423,697	4,102,841
Population aged 75-84	193	8,190	280,090	2,751,135
Population aged 85-89	49	2,029	63,597	637,701
Population aged 90+	28	1,090	31,267	316,323
Mean age of population	44.4	42.68	38.61	38.6

Source: National Statistics Website: [www.statistics.gov.uk](http://www.statistics.gov.uk)

The Fylingdales Ward has an average age of 44, which is slightly higher than the Scarborough Non-Metropolitan District, Yorkshire and The Humber Region, and the England average.

The area also has a higher proportion of elderly persons aged 75+ (11.99%) when compared to the District average of 10.65% and the Regional average of 7.55%.

The number of working aged persons aged 16-74 (69.97%) is below the District average of 71.1% and the Regional average of 71.98%.

The number of young people aged 0-15 (18.04%) is below the District average of 18.26% and the Regional average of 20.46%.

## Economic Activity

Table 5.3 illustrates the levels of Economic Activity within the Fylingdales Ward, Scarborough Non-Metropolitan District, Yorkshire and The Humber Region, and England as a whole.

**Table 5.3 Economic Activity**

People aged 16-74	Fylingdales Ward	Scarborough Non-Metropolitan District	Yorkshire and The Humber Region	England
All People	1,576	75,535	3,574,331	35,532,091
<b>Economically active:</b>	1,007 (63.89%)	47,908 (63.42%)	2,328,541 (65.16%)	23,756,707 (66.87%)
Employees Part-time	206 (13.07%)	10,347 (13.7%)	460,689 (12.89%)	4,196,041 (11.81%)
Employees Full-time	406 (25.76%)	24,756 (32.77%)	1,385,732 (38.77%)	14,499,241 (40.81%)
Self-employed	334 (21.19%)	8,301 (10.99%)	258,816 (7.24%)	2,954,988 (8.32%)
Unemployed	32 (2.03%)	2,720 (3.6%)	132,508 (3.71%)	1,188,855 (3.35%)
Full-time student	29 (1.84%)	1,784 (2.36%)	90,796 (2.54%)	917,582 (2.58%)
<b>Economically inactive:</b>	569 (36.11%)	27,627 (36.58%)	1,245,790 (34.84%)	11,775,384 (33.13%)
Retired	278 (17.64%)	13,888 (18.39%)	510,132 (14.27%)	4,811,595 (13.54%)
Student	73 (4.63%)	2,468 (3.27%)	173,792 (4.86%)	1,660,564 (4.67%)
Looking after home/family	100 (6.35%)	4,689 (6.21%)	230,344 (6.44%)	2,316,229 (6.52%)
Permanently sick/disabled	92 (5.84%)	4,577 (6.06%)	217,756 (6.09%)	1,884,901 (5.3%)
Other	26 (1.65%)	2,005 (2.65%)	113,766 (3.18%)	1,102,095 (3.1%)

Source: National Statistics Website: [www.statistics.gov.uk](http://www.statistics.gov.uk)

Table 5.3 shows that the number of part-time employees in the Fylingdales ward is above the average for England and the Yorkshire and The Humber Region, however the number of full-time employees is considerably lower than the District, Region and England average.

Unemployment in the Fylingdales Ward is lower than the District, Region and England average.

The number of retired persons in Fylingdales Ward (17.64%), whilst lower than the Scarborough Non-Metropolitan District average (18.39%), is higher than the Region (14.27%) and England (13.54%) average.

## 5.4 Impacts

### Construction Phase

During the construction phase there are a number of issues that will impact on the surrounding area, and in particular the surrounding community.

Construction noise is a potential impact that will affect the surrounding area and the local population. Given the relatively rural nature of the study area, and the adjacent Business Park this impact is

unlikely to be significant. This has been considered in greater detail in Section 11.0 Noise and Vibration of this Environmental Statement.

In addition to noise, dust is a potential impact that will affect the surrounding area and local population. Due to the nature of construction however this is unlikely to cause a significant impact. This has been considered in greater detail in the Section 10.0 Air Quality.

Construction traffic is unlikely to impact on the local population given the scale of the proposed development and the construction methods to be employed.

The proposed development will also impact upon a public footpath which crosses the site.

### **Operational Phase**

Operation noise from the proposed development is unlikely to impact on the local community, as a result of the adjoining land uses and sporadic residential development. Noise impact is assessed in greater detail under the noise section of this Environmental Statement.

Similarly the impact of dust is likely to be insignificant given the nature of the proposed development. Again this is discussed in greater detail in the air section of the Environmental Statement.

The proposed development is likely to lead to an increase in vehicular traffic as a result of employees, visitors to the proposed development and deliveries. A Traffic Impact Assessment has been undertaken and this has concluded that the proposed development will not have a detrimental impact upon the surrounding highway network.

There will be no loss of community facilities, recreational facilities or amenity as a result of the proposed development.

In addition to the negative impacts of the proposed development, there are also a number of positive impacts.

The operational phase will bring much needed, full-time employment to the Whitby area, which should stem outward migration of the local population, providing new life to the local economy and the local community.

## **5.5 Mitigation**

Mitigation measures in relation to the impact upon Air, Noise and Traffic are set out within the relevant sections of this Environmental Statement.

No further mitigation measures are necessary.

## **5.6 Residual Impacts**

No residual impacts are predicted for the proposed development.

## 6.0 WATER QUALITY AND DRAINAGE

### 6.1 Introduction

This section of the Environmental Statement addresses the issues surrounding surface and sub-surface water activity with regard to the proposed industrial units at Enterprise Way, Whitby.

In general, roads are designed to drain freely to prevent build up of standing water on the road surface. Contaminants deposited on the road are therefore quickly washed off during rainfall. The purpose of this assessment is to ensure that an environmentally acceptable drainage mechanism is recommended and to mitigate against any potential contamination risks during construction.

This section should be read with reference to Figure 6.1 The Water Environment and Figure 6.2 Groundwater Vulnerability. This section should also be read in conjunction with Section 7.0 Ecology and Nature Conservation and Section 8.0 Geology and Soils. Drawing IBW00159-004 accompanies this document and provides details from the topographical survey undertaken at the site.

### 6.2 Assessment Methodology

The polluting potential of any proposed industrial/urbanised area exists during construction, operation, demolition and restoration. The construction phase includes the construction of access roads, structural foundations and any other site infrastructure. With regard to the proposed site and access roads in the proposed development, the assessment has been undertaken in accordance with Design Manual for Roads and Bridges (DMRB), Volume 11, Section 3, Part 10, Road Drainage and the Water Environment, Stage 3 assessment.

In order to examine the polluting potential of the proposal on adjacent receiving waters, assessments are made concerning the impact of all surface water discharge, both during the construction phase and thereafter under normal daily use (operational phase). Pollution from the proposal during the operational phase could arise from either accidental spillage or routine surface runoff.

A study of the area was carried out using the following methods:

- Reference to Regional Spatial Strategy The Yorkshire and Humber Plan December 2005;
- Reference to Geology of the North York Moors – North York Moors National Park;
- Reference to Scottish Environmental Protection Agency (SEPA) Pollution Prevention Guidance Notes;
- Reference to Environment Agency – Esk and Coastal Streams Catchment Flood Management Plan (CFMP);
- Planning Policy Guidance 25: Development and flood risk; and
- Reference to Hymas Site Services Geotechnical Report (Report No. GMA/6856.03).

### 6.3 Existing Baseline Conditions

#### The River Esk Catchment

The proposed industrial units lie within the catchment boundary of the River Esk. This catchment drains the northern section of the North York Moors into the North Sea. The majority of the catchment area is located to the south of the river with the most significant tributaries draining elevated moorland to the south. The northern boundary of the catchment consists of lower moorland, running directly east toward Whitby. The tributaries located on the northern side of the Esk River primarily drains agricultural land. The catchment is sparsely populated without the pressures of industrialisation and urbanisation affecting other rivers in the locality. Open moorland characterises much of the catchment and is an important habitat for a wide variety of wildlife.

Numerous drainage tributaries are located to the southern side of the River, in close proximity to Whitby. A series of Becks drain to the River Esk include; Buskey Beck, Wash Beck, Shawn Riggs Beck, Rigg Mill Beck, Intake Beck, Stainsacre Beck and Spital Beck. A tributary of Spital Beck is located close to the north-eastern periphery of the proposed development. It then flows in a

northwesterly direction for approximately 130m until its confluence with the River Esk. These are highlighted in Figure 6.1 The Water Environment.

### **Water Quality in the Region**

The majority of the River Esk has very good water quality, with the diverse invertebrate fauna dominated by mayflies, stoneflies, caddis-flies and other pollution sensitive groups. Good water quality is also very important in sustaining other species such as salmon, sea trout, dippers and otters.

### **Groundwater Vulnerability**

Movement of groundwater in the Esk Catchment is generally confined to minor aquifers formed in the Ravenscar Group formation, made of sandstone and limestone. The proposed development is located on a Minor Aquifer of Low Vulnerability. These types of formations are not regarded as holding significant quantities of groundwater. These formations and the overlying soils have the ability to replenish groundwater recharge elsewhere in the catchment due to surface run-off levels.

## **6.4 Impacts**

Water quality impacts from construction of the proposed development can be broadly categorised under three headings:

- construction phase;
- continuous or on-going pollution and impact in the form of access road drainage; and
- incidental pollution and impacts associated mainly with accidents involving vehicles carrying hazardous materials.

### **Construction Phase**

Any river crossings or excavations and construction close to rivers or streams have the potential to impact on water quality and fisheries. Contaminated water incidents are liable to arise from site excavations, site preparation and use of surface materials and from spillage of oils or other harmful substances. Construction of abutments for proposed crossings could result in excessive silt generation, leading to high levels of suspended solids, high turbidity, colouring and reduced water transparency in the watercourse.

The Scottish Environmental Protection Agency (1996) list the main sources of pollution from construction sites adjoining rivers as follows:

- The discharge or entry into waters of contaminated site runoff or pumped contaminated surface/ground waters;
- Direct disturbance of the beds of rivers and streams by excavation or fording;
- Loss of oil from machinery or storage areas; and
- Cement and cement wash from batching plants, storage areas and other areas where cement grout or concrete is being applied.

The potential to cause adverse impacts on the chemical and biological quality of individual systems exists. Concerns for the preservation of the quality of the surface water and groundwater will revolve around the construction phase and the operational phase. During construction, great care must be taken to ensure that contamination in chemical (for example hydrocarbons) and physical (for example suspended solids) forms is minimised.

The most likely risks associated with the construction phase of the proposed development will be from sediments and mineral oils. Those associated with sediment originated from operations including stockpile storage, haul routes, access roads, earthworks to provide landscaping, mechanical digging of new or existing drainage channels, vehicle access over watercourses, construction of watercourse crossings and digging of excavations.

## Operation Phase

Maintenance of industrial units can involve use of oils and other harmful substances and these should be stored in a site compound with one location for chemical storage. These can directly affect water quality and indirectly affect both human and ecological uses of water.

### Accidental Spillage

A hazardous spill would most likely involve oil products, bulk liquid cement or a corrosive substance such as a strong acid or alkali, all of which could have very severe water quality impacts if they reach a watercourse.

Contamination by accidental spillage is the most damaging form of surface runoff pollution for nearby watercourses. These can vary from small petrol spillages to a major incident involving loss of chemicals or oils from tankers or other bulk containers. Although these incidents are rare, suitable emergency plans must be in place. Release of hazardous material could lead to runoff to streams and subsequent significant contamination of rivers outside of the immediate study area.

## 6.5 Mitigation

### Construction Phase

Mitigation at this stage will be directed at minimising escape of sediment and soil into watercourses, regardless of their size, as well as the prevention of oil or liquid cement spills from construction areas to waterways. All oils and fuels will be stored in secure bunded areas and refuelling will not be carried out near watercourses. If the site works involve the discharge of drainage water to the river, temporary oil interceptor facilities should be installed and maintained.

All surface water collected from the highway is to be treated by filters and oil interceptors before entering watercourses. There shall be no discharge of suspended solids or any other deleterious matter to watercourses.

### Operational Phase (Surface Run-off)

The design, construction and maintenance of the site drainage systems will follow the best practice guidelines described in SEPA Pollution Prevention Guidelines (PPG) as follows:

PPG 1	General guide to the prevention of pollution of controlled waters.
PPG 2	Above ground oil storage tanks.
PPG 4	Disposal of sewage where no mains drainage is available.
PPG 5	In, near or liable to affect watercourses.
PPG 6	Working at demolition and construction sites.
PPG 21	Pollution incident response planning.

PPG 21 relates to contingency planning which should be adopted in case of an incident of accidental spillage.

### Foul Drainage

The proposed development will generate additional foul sewage discharges within the area. It is anticipated that the foul sewage will be generally domestic in nature arising from employees and visitors to the developed site.

It is estimated that there will be up to 200 employees when the units are fully taken up with an allowance for 60 visitors. The foul sewage discharge will originate from toilets and wash hand basins.

The total domestic foul sewage arising from the proposed development is as assessed in the following table.

**Table 6.1 Total domestic foul sewage arising from the proposed development**

Description	Number of people	Per capita load (l/h/d)	Daily Load (m <sup>3</sup> /day)	Average Rate of Discharge over 8hr working day (litres/sec)
Employees / Staff	200	50	10.0	0.35
Visitors	60	25	1.5	0.05
		<b>TOTAL</b>	<b>11.5</b>	<b>0.40</b>

The foul sewage load arising from the development has been advised to Yorkshire Water who are the sewerage undertaker for the location of the proposed development. A copy of the relevant correspondence with Yorkshire Water is included as an Appendix 6.1 to this document. Yorkshire Water have advised that the foul sewage should be taken to the existing public sewer in Fairfield Way north of the proposed development site.

It is proposed that the foul discharge from the proposed development be taken to an existing private foul sewer pipe located in Enterprise Way. This private foul sewer currently discharges to the identified public sewer in Fairfield Way.

The site topography and proposed finished levels for the development will enable the site to be serviced by a gravity connection to the existing foul sewer in Enterprise Way.

The foul drainage general arrangement for the proposed development is shown on Drawing IBW0159-002 which accompanies this environmental statement.

### Surface Water Management

The proposed development will alter the run-off characteristics of the existing land mass by the introduction of impermeable areas associated with roofs, roads and other hardstanding areas.

Environment Agency have been consulted on the proposed development. The relevant correspondence is included in Appendix 6.1.

The site lies within Flood Zone 1 as defined in Planning Policy Statement 25. Flood Zone 1 is an area of little or no risk with an annual probability of flooding from rivers and the sea of less than 0.1%.

At a consultation meeting held with Environment Agency on 28th March 2007 it was agreed that the submission in respect of this proposed development should focus on surface water management as opposed to flood risk assessment given the location in Flood Zone 1 and the low probability of flooding from external sources.

The correspondence received from Environment Agency identified the following criteria for management of the surface water run-off generated by the proposed development.

- Surface water discharges from the site should be flow regulated to the greenfield run-off rate for a 1 in 1 year storm,
- Sufficient storage should be provided within the drainage system to accommodate at least a 1 in 30 year storm,
- Storm water resulting from a 1 in 100 year event needs to be stored on site without risk to people or property,
- Design proposals need to take into account climate change.



In accordance with the recommended hierarchical approach to the selection of options for dealing with surface water run-off a range of systems were considered before the preferred option was identified.

The main options considered for managing the surface water run-off are summarised below together with comments on their application on this site:-

Swales and filter strips –	Limited land available within the site to accommodate the scale of installation required to achieve the stipulated performance criteria
Filter drains and permeable surfaces –	Limited opportunity for installation of filter drains given extensive areas on site subjected to vehicle movements. Use of permeable surfaces considered unsuitable given the robust surface required to withstand large vehicle movements
Infiltration Devices –	Concern in relation to sustainability of infiltration devices. Run-off issues from greenfield site apparent during site visit with visible surface water runs into road gullies and from embankments on low side of site
Basins and ponds –	Similar issues as for swales and filter strips ie limitations on available land within the proposed site layout
Storage and attenuation –	Considered as the most sustainable approach in this environment and adopted as preferred approach

A suitably sized surface water storage facility is required to enable the 1 in 30 year storm to be retained on site. In addition the final surface levels of the roads and hardstanding areas have been configured to provide a dish arrangement along the centre of the site to enable the additional flood water in a 1 in 100 year storm to be retained on the site. The general finished ground level around the boundary of the site has been set to 53m.

The various elements of the storm water system have been designed using the WinDes hydraulic analysis software package.

At the consultation meeting with Environment Agency on 28<sup>th</sup> March 2007 it was agreed that the surface water run-off rates could be increased at greater return period storms to better correlate run-off from the development with the historical run-off rates for the greenfield site.

The greenfield run-off values have been established in accordance with the Interim Code of Practice for Sustainable Drainage Systems using the Institute of Hydrology Report 124 method as adapted for catchments less than 50 hectares.

The following input parameters have been utilised:-

*M<sub>560</sub> = 18mm*  
*Standardised Average Annual Rainfall = 685mm*  
*Volume run off coefficients = 0.75 (summer); 0.84 (winter)*

The following table documents the greenfield run-off flow values referenced in the development of the selected design.

**Table 6.2 Greenfield run-off flow values**

Design Storm	Greenfield run-off flow
1 in 1 year	9 litres/sec
1 in 30 year	18 litres/sec
1 in 100 year	21 litres/sec

The general arrangement of the proposed surface water system as designed for the development is shown on Drawing IBW0159-003 which accompanies this environmental statement.

The system incorporates twin 1500mm diameter pipes provided along the length of the site to enable the 1 in 30 year storm event to be retained without any out-of-system flooding. The outlet chamber from this storage facility will be fitted with a flow control device to limit the discharge to a maximum of the greenfield value for the equivalent design storm.

It is proposed that the discharge from the surface water drainage system will be taken to an existing 375mm diameter storm pipe located in Enterprise Way.

The surface water discharge outlet from the development will be provided with an Oil Interceptor in accordance with the requirements documented in PPG3 as issued by the Environment Agency.

The flow value discharges from the proposed surface water system are documented in the table below together with the greenfield values for comparison.

**Table 6.3 Flow value discharges from the proposed surface water system**

Design Storm	Surface water system discharge flow	Greenfield run-off flow
1 in 1 year	9 litres/sec	9 litres/sec
1 in 30 year	12 litres/sec	18 litres/sec
1 in 100 year	15 litres/sec	21 litres/sec

Analysis of the proposed surface water drainage system using the WinDes software package confirms that there is no out-of-sewer flooding for a 1 in 30 year design storm of 240 minutes duration. 240 minutes has been determined as the critical duration storm for the storage facility.

The surface water drainage system has also been checked for a 1 in 100 year design storm and the analysis has indicated that whilst the system will be surcharged, the flood level within the site would be 52.72m which means that the flooded volume will be retained within the site in the "dished" area created along the centreline of the development. The building floor levels are proposed at 53.175m and as noted previously the finished levels at the perimeter of the site will be set to 53.00m.

In relation to climate change the surface water system design has taken into account the recommendations detailed in Planning Policy Statement 25 (PPS25). The design life of the buildings has been taken as 60 years which takes the life span of the development up to 2067. Table B.2 of PPS25 indicates that the parameter of peak rainfall intensity for the period 2055 to 2085 should be increased by 20% to take account of climate change.

The surface water drainage system has been analysed for the 1 in 100 year storm with the peak intensity increased by 20%. The analysis has indicated that the flooded volume will rise to a level of 52.76m however this is still below the floor levels of the building and below the finished ground levels around the perimeter of the site.

On the basis of this analysis the proposed surface water drainage system will deal with the additional run-off arising from the creation of impermeable surfaces within the development in accordance with the performance criteria as advised by Environment Agency.

## 6.6 Residual Impact

The proposed development site lies within Flood Zone 1 – the risk of flooding on this type of designated land from fluvial and tidal sources is low. Flood risk assessment should be made but should largely focus on the management of surface water run-off. The proposed sustainable urban drainage techniques should enable the control of surface water run-off as close to its origin as possible. Adherence to the proposed mitigation measures set out in Section 6.5 should ensure compliance to the relevant authority (Environment Agency, Local Planning Authority) standards with regard to the management of surface water run-off.

## 6.7 References

DMRB (2000). *Design Manual for Roads and Bridges Volume 11: Environmental Assessment*. The Stationery Office, London, UK.

Environment Agency – [www.environment-agency.gov.uk](http://www.environment-agency.gov.uk)

Geology of the North York Moors – North York Moors National Park

O'Reilly, P. (2002) *Rivers of Ireland – A fly fishers guide*. 5<sup>th</sup> Ed. Merlin Unwin Books.

Planning Policy Guidance 25: Development and flood risk – Communities and Local Government

Regional Spatial Strategy - The Yorkshire and Humber Plan December 2005

SEPA (Scottish Environmental Protection Agency) (1996). *Guidelines for Water Pollution Prevention from Civil Engineering Contracts*. Scottish Environmental Protection Agency.

## 7.0 ECOLOGY AND NATURE CONSERVATION

### 7.1 Introduction

Ecology can be defined as 'the scientific study of living organisms and their relationship with each other and their environment' whilst nature conservation is concerned with 'maintaining a viable population of the country's characteristic fauna and flora and the communities which they comprise'.

This section of the Environmental Statement examines the ecological and nature conservation aspects in the vicinity of the proposed scheme; the environmental protection that exists in the area; and the potential impact of the proposal on ecology and nature conservation interests. The principal objective of the ecological assessment is to undertake sufficient assessment to identify any significant nature conservation impacts likely to arise from construction of the scheme, and to identify the location, type and importance of all areas of significant nature conservation interest that may be affected.

The aims of this ecological assessment are:

- To identify and evaluate habitats and notable plant and animal species in the context of the proposed scheme, the local context and UK as a whole;
- To collate information on any protected species and habitats according to appropriate legislation Europe;
- To identify the presence of any relevant species and habitats according to the UK Biodiversity Action Plan;
- To identify areas of interest for further survey where appropriate; and
- To undertake appropriate survey and evaluation.

### 7.2 Methodology

An experienced ecologist was engaged to review existing ecological and anecdotal information and conditions at the proposed site. A habitat survey was carried out for areas of nature conservation interest, including semi-natural habitats, green corridors, river corridors and areas of potential nature conservation interest. Habitat survey methodology has been undertaken in accordance with industry standard Joint Nature Conservation Committee (JNCC) Phase 1 Habitat Survey (JNCC, 2003), and impact assessment has been undertaken in accordance with the Institute of Ecology and Environmental Management (IEEM) Ecological Impact Assessment Guidelines (IEEM, 2006), and also using experience of 'best practice' in the ecological assessment of proposed developments. The impact significance is a combined function of the value of the affected feature (its ecological importance), the type of impact and the magnitude of the impact. The scope of the survey issues are described below.

#### 7.2.1 Consultation

Consultation was undertaken with North Yorkshire Environmental Services; Environmental Health Officer – Scarborough Council; Environment Agency; North York Moors National Park Authority; English Nature; and North Yorkshire County Council.

A full list of the bodies consulted as part of the environmental assessment scoping exercise is given in Section 3.0 Scoping Study, Table 3.1. The written responses received from consultees are presented in Appendix 3.1.

#### 7.2.2 Desk Study

A desk study was undertaken of the proposed scheme area and a surrounding buffer zone of 5 km, to collate relevant environmental data and anecdotal information to assist with the ecological assessment and evaluation. Reference was made to the following key publications, documents and websites:

- English Nature <http://www.english-nature.org.uk/>;

- Wildlife and Countryside Act (WCA) 1981;
- Wildlife and Countryside (Amendment) Act 1985;
- The Conservation (Natural Habitats, &c.) Regulations 1994 (as amended);
- The Countryside and Rights of Way (CROW) Act 2000;
- Schedule 5 of the Wildlife and Countryside Act 1981;
- UK Biodiversity Action Plan (BAP);
- Protection of Badgers Act 1992;
- Water Act 2003;
- Wildlife and Countryside (Amendment) Act 1991;
- Environment Act 1995;
- Natural Environment and Rural Communities Act 2006;
- EU Regulation on the Protection of Species of Wild Fauna and Flora by Regulating Trade 338/1997; and
- Conservation (Natural Habitats &c.) (Amendment) (England) Regulations 2000, SI 192.

### **Plants and Habitats - Extended Phase 1 Survey**

An extended Phase 1 Habitat Survey was undertaken to identify notable and protected habitats, and plant species. The entire site and adjacent habitats were walked in November 2006 by an experienced ecologist noting plant communities, habitats, landscape features of ecological value, potential habitats for different ecological groups. The Phase 1 field survey and mapping methodology, developed by the Joint Nature Conservation Committee (JNCC, 2003), was used categorising habitats and landscape features on site, whilst recording any Protected Species or features capable of supporting protected species.

### **Mammals – Badger, Otter, Bats, Small Mammals**

A specific survey for the presence of protected mammals was not undertaken, however, notes were also made on any evidence of mammal species recorded on the site during the habitat survey. Observation concentrated on mammals of conservation importance, such as badgers and otters. Any potential bat roosts were noted during the habitat survey. These include any buildings or bridges proposed for demolition and any trees with splits or cracks in the trunk that may be suitable for maternity roosts, harems or hibernaculæ. Otters and bats are protected species and their homes are legally protected by the Wildlife and Countryside Act 1981. Badgers are protected species and their homes are legally protected by the Protection of Badgers Act 1992.

### **Birds**

A specific survey for the presence of protected birds was not undertaken, however, notes were made on bird species recorded on the site during the habitat survey.

### **Invertebrates**

The mosaic of mature trees, scrub, hedges, tall ruderals, marshy and agricultural grassland, streams and ditches is considered to be of local interest for invertebrates.

### **Amphibians**

Great Crested Newt and the Natterjack Toad are protected under Schedule 2 of the Conservation (Natural Habitats, etc.) Regulations, 1994, (Regulation 38) and Schedule 5 of the WCA 1981. No specific survey was undertaken or considered necessary in view of the absence of appropriate habitat.

### **Reptiles**

No specific survey was undertaken or considered necessary in view of the absence of appropriate habitat.

## 7.3 Baseline Conditions

### 7.3.1 Designated Ecological Sites

National Nature Reserves (NNRs) are areas of land of national, and sometimes international, importance for nature conservation which are owned or leased by English Nature, or managed by others by their agreement, and declared under section 19 of the National Parks and Access to the Countryside Act 1949 or section 35 of the Wildlife and Countryside Act 1981. All NNRs are SSSIs. The nearest NNR is Forge Valley Woodlands which is located over 20km to the south east

Special Areas of Conservation (SACs) are sites of international importance. Legal backing for the candidate Special Areas of Conservation is provided by the EU Directive on the Conservation of Natural Habitats and of Wild Flora and Fauna (92/43/EEC; commonly known as the 'Habitats Directive'). The Habitats Directive is implemented in England through the Conservation (Natural Habitats, &c.) Regulations 1994. The North York Moors SAC (UK0030228) covers 44095.15 hectares and its northern boundary lies approximately 3.5 km south of the proposed site. Arnecliff and Park Hole Woods SAC (UK0030142) covers 52.67 Hectares and is situated approximately 15km west of the proposed site.

Special Protection Areas (SPAs) are designated areas of international importance for birds. Legal backing for Special Protection Areas is provided by EU Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Flora and Fauna ('Habitats Directive'), which supersedes EU Directive 79/409/EEC on the Conservation of Wild Birds ('Birds Directive') (EC, 2000). The site lies in the North York Moors SPA (UK9006161)

Ramsar sites are wetlands of International Importance especially as waterfowl habitat. The UK is a signatory to the Convention on Wetlands of International Importance especially as Waterfowl Habitat (the Ramsar Convention 1979). There are no Ramsar sites within the study area.

Sites of national importance, in England, are termed Sites of Special Scientific Interest (SSSI). Legal backing for SSSIs is provided by the Wildlife and Countryside Act 1981 (as amended) and, in relation to European sites, the Conservation (Natural Habitats & c.) Regulations 1994. The site lies within the North York Moors SSSI, Whitby-Saltwick SSSI lies 2km north of the site and Robin Hoods Bay SSSI is situated 3km south-east.

### 7.3.2 Non-Designated Areas of Nature Conservation Interest

The proposed site is within the catchment area of the River Esk (1.5km west). 237km of this watercourse is protected under the EC Freshwater Fish Directive. The Spical Beck watercourse which flows just north of the site boundary is a tributary of the River Esk.

### 7.3.3 Designated Species

The English Nature website, UK BAP and Scarborough BAP were interrogated to identify flora and fauna which could possibly be present within the study area that are afforded protection under the Wildlife & Countryside Act 1981. Flora found are presented in Table 7.1 and Fauna found are presented in Table 7.2.

Table 7.1 Protected Flora recorded from grid squares covering the study area

Latin binomial	Common name	Habitat
<i>Carex muricata</i>	Prickly Sedge	Steep slopes, ledges, bushy and grassy areas
<i>Centaurea cyanus</i>	Cornflower	Arable fields, often on sandy, acidic soils
<i>Filago lutescens</i>	Red-tipped cudweed	Light open soils on disturbed grounds
<i>Galeopsis angustifolia</i>	Red hemp-nettle	Arable land as well as on coastal sands and shingle
<i>Linnaea borealis</i>	Twinflower	Native pinewoods, sometimes in plantations dominated by scots pine
<i>Mentha pulegium</i>	Pennyroyal	Seasonally wet habitats subject to grazing, trampling, dunging and general disturbance

Latin binomial	Common name	Habitat
<i>Scandix pecten-veneris</i>	Shepherd's needle	Arable land and waste places
<i>Silene noctiflora</i>	Small-flowered catchfly	Arable land, waste ground and sandy seashores

**Table 7.2 Protected Fauna recorded from grid squares covering the study area**

Latin binomial	Common name	Habitat
<i>Arvicola terrestris</i>	Water Vole	Lowland areas near water
<i>Meles meles</i>	Eurasian Badger	Farmlands
<i>Lepus europaeus</i>	Brown Hare	Farmlands
<i>Lutra lutra</i>	European Otter	Freshwater rivers, sea lochs and coastal regions
<i>Muscardinus avellanarius</i>	Hazel Dormouse	Hazel woodlands
<i>Pipistrellus pipistrellus</i>	Common Pipistrelle	Farmland habitats
<i>Triturus cristatus</i>	Great Crested Newt	Ponds and water bodies with few fish and plenty of submerged vegetation

## 7.4 Flora & Fauna

### 7.4.1 Habitat Survey

The site was surveyed during November 2006 using Phase 1 habitat survey methodology as per JNCC (2003). A desktop review was carried out to identify features of ecological importance within the study area and surrounding region. A habitat plan illustrating the location of specific habitats has been prepared and is presented as Figure 7.1. The results of the baseline survey were evaluated to determine the significance of the habitats identified in the study area on an importance scale of:

**International-----National-----County-----Local importance-----Local value**



See Appendix 7.1 for a full description of the criteria used in this assessment. It should be noted that there are no standard criteria for evaluating the importance of ecological features in Britain and any evaluation of the type presented below has to be considered provisional. Furthermore, this evaluation may be biased by the fact that some groups of flora and fauna have been studied in more detail than other groups. This section should be read with reference to Figure 7.1.

**Table 7.3 Habitats recorded at the study site**

Classification	Description
A1.1	Broadleaved Woodland
A3.1	Scattered Broadleaved Trees
B4	Improved Grassland
J1.1	Cultivated Arable Land
J2.3	Boundaries

#### Woodland-A1.1

A block of immature woodland occurs approximately 150m to the south west of the proposed site. The canopy is almost completely made up of plantation semi-mature sycamore. This habitat may be of importance to the local breeding bird communities.

*Evaluation:* Ecologically, this habitat is of moderate local value.

### Improved Grassland-B4

Improved fields have a limited range of grassland and common herbs, mainly those demanding nutrients. Grass species include crested dogstail (*Cynosurus cristatus*), cocksfoot grass (*Dactylis glomerata*) and red fescue (*Festuca rubra*), although dominated by perennial rye-grass (*Lolium perenne*). Other species within the sward include common mouse-ear (*Cerastium fontanum*), ribwort and greater plantain (*Plantago lanceolata/major*), creeping buttercup (*Ranunculus repens*), common chickweed (*Stellaria media*), and red and white clover (*Trifolium pratense/repens*). Field thistle (*Cirsium arvense*), common sorrel (*Rumex acetosa*) and broad-leaved dock (*Rumex obtusifolius*) are indicative of localised enrichment by grazing animals (cattle and horses). This habitat is heavily affected by intensive farming practice such as grazing, fertilizers and drainage.

*Evaluation:* Ecologically, this habitat is of low local value.

### Scattered Broadleaved Trees-A3.1

An area of mature scattered trees is located along the western boundary of the proposed site. The dominant canopy species are sycamore (*Acer pseudoplatanus*), birch (*Betula species*), alder (*Alnus glutinosa*) and white willow (*Salix alba*). The trees offer cover for faunal species such as farmland bird species, rabbits and moles.

*Evaluation:* Ecologically, this habitat is of moderate local value.

### Cultivated Arable Land-J1.1

Some arable land surrounds the proposed site. This land is potentially of importance to wintering feeding flocks of farmland birds feeding amongst the stubble.

*Evaluation:* Ecologically, this habitat is of low local value.

### Boundaries-J2.3

Hedgerows occur mainly on the south and eastern boundaries of the proposed site. Most are defunct as they have not been managed for conservation and are species poor, timber, post and wire and electric fencing are also used to maintain field demarcation and retain livestock. Dominant species are alder (*Alnus glutinosa*) and willows (*Salix spp.*), blackthorn (*Prunus spinosa*), hawthorn (*Crataegus monogyna*) and ash (*Fraxinus excelsior*). No plant species of conservation interest were noted within the study area.

*Evaluation:* Ecologically, this habitat is of low local value.

### Protected Flora

No protected flora was recorded on the site during the field surveys.

## 7.4.2 Fauna Survey

### Birds

Due to current farming and adjacent industrial activities, there is little potential for future colonisation. Due to the poor quality habitat, limited refuge and nesting availability and high level of operational activity derived disturbance on site, it is unlikely that any birds of conservation concern breed on this site. The species found on or near the study area is presented as Table 7.4. These species are typical of the mosaic of habitats found throughout wider urban fringe and agricultural areas. The stream side habitats to the north east of the site are of some value to birds but the remainder of the site holds little potential for nesting birds.

**Table 7.4 Bird Species Recorded During Survey**

Scientific Name	Common Name
<i>Anthus pratensis</i>	Meadow Pipit
<i>Corvus frugilegus</i>	Rook
<i>Corvus corone</i>	Carrion Crow



<i>Fringilla coelebs</i>	Chaffinch
<i>Parus caeruleus</i>	Blue Tit
<i>Accipiter nisus</i>	Sparrow Hawk
<i>Pica pica</i>	Magpie
<i>Troglodytes troglodytes</i>	Wren
<i>Erithacus rubecula</i>	Robin
<i>Carduelis cannabina</i>	Linnet
<i>Turdus merula</i>	Blackbird

### Otter

No evidence of Otter (*Lutra lutra*) was found on the site. The small stream located to the north east of the site was walked for a minimum of 500m each side of the proposed site. No field signs of otter were noted in the study area or along the stream banks. Anecdotal evidence suggests that the site is used by foxes (*Vulpes vulpes*) although no dens were recorded.

### Bats

Bats roost in trees and built structures, and although no specific survey for bats was carried out there are no suitable roosts for bats on site. All English Bats are protected by the Bonn Convention 1992 (Agreement on the Conservation of Bats), the Bern Convention, 1982 and the Wildlife and Countryside Act 1981.

### Badger

No signs of Badger (*Meles meles*) activity were recorded from the survey site despite a thorough search for field signs of this species. The ground conditions favoured positive print identification, but survey yielded none.

### Rabbits & Moles

Rabbits (*Oryctolagus cuniculus*) and rabbit warrens were observed near the study area and this population is likely to attract foxes (*Vulpes vulpes*). Evidence of mole (*Talpa europaea*) activity was also observed beneath the area of mature scattered trees located along the western boundary of the proposed site.

## 7.5 Impact Assessment

### 7.5.1 Designated Ecological Sites

The site does not directly affect any ecological features of the Natura sites in the surrounding area (European Designations).

Impact assessment = Imperceptible Impact.

### 7.5.2 Non-designated Areas of Nature Conservation Interest

The site does not directly affect any Non-designated Areas of Nature Conservation Interest.

### 7.5.3 Local Habitats and Wildlife

The nature of the proposed development involves disruption of the local ecology directly during the operational and construction phases.

The main potential impacts result from:

- the physical removal of soils and vegetation and the consequent loss or substantial modification of the whole or part of a habitat. This results in the potential removal or fragmentation of habitats and breeding and foraging areas of faunal species.

- potential noise during the construction and operational phases to cause disturbance to faunal species.
- potential impacts through discharge to an adjacent watercourse.

Where impacts are predicted the magnitude of the potential impact is assessed using criteria set out in Appendix 7.1.

The proposed new building will result in the direct loss of improved agricultural land. In terms of habitat quality there are no features on site which would raise this site above local importance. This vegetation type is identified as of low local ecological value.

Impact assessment = Imperceptible Impact.

The broadleaved woodland habitat situated to the west of the development will not be physically impacted upon by the development. The fauna found within the woodland may suffer a slight noise disturbance due to construction however this is likely to be short lived and slight. This habitat type is identified as of moderate local ecological value.

Impact assessment = Slight Impact

The proposed development will not impact on the scattered tree habitat on the northern boundary of the site. Some disruption to the faunal species which reside there may occur during the construction and to a lesser extent the operational phase due to noise. This habitat type is identified as of moderate ecological value.

Impact assessment = Slight Impact

Impact to wintering feeding birds utilising the arable land adjacent the proposed site will be avoided. This habitat is identified as of low ecological value.

Impact assessment = Imperceptible Impact

#### **7.5.4 Watercourses and Aquatic Ecology**

If storm water from the development is to be discharged to the Spical Beck watercourse. An oil interceptor will most likely be required. Spillage of chemicals and oils into the Spical Beck watercourse is likely to have a negative impact on the flora and fauna associated with it. However, the risk of such events are extremely low, since no significant storage of liquids will take place on site. No significant impacts are predicted on watercourses or aquatic ecology.

### **7.6 Mitigation**

#### **7.6.1 Designated Ecological Sites**

No mitigation is required for designated ecological sites.

#### **7.6.2 Non-designated Areas of Nature Conservation Interest**

No mitigation is required for non designated ecological sites.

#### **7.6.3 Local Habitats and Wildlife**

Mitigation of the identified ecological impacts resulting from the proposed development have been addressed as follows:

- Avoidance of impact;
- Management or reduction; and
- Compensatory measures for the impacts.

#### Avoidance of impact

It is proposed that the construction of buildings will only occur on the improved agricultural land. Construction activity should be limited during bird breeding season (April-August).

#### Management or reduction of impact

The physical disturbance of fauna from on-site activity will be minimised by restricting site activities to clearly designated construction areas. Storage of materials on site should be undertaken in accordance with the recognised Codes of Practice and best practice techniques to prevent pollution incidents. The adoption of the principles of Best Available Technology Not Entailing Excessive Cost (BANEEC) required by the 1990 Environmental Protection Act to prevent or minimise pollution, will ensure that the authorised processes are regularly inspected and that emissions from the process will not cause any statutory air or water quality standard to be exceeded. This will minimise impacts on the surrounding ecology.

Compensatory measures - compensatory mitigation measures aim to enhance the habitats peripheral to the site. Extensive native tree and shrub planting is to be provided around the buildings and to extend existing hedgerows. The implementation of the compensatory measures will be sensitive to the various breeding, feeding and seasonal behaviours exhibited by the flora and fauna found in the surrounding habitats.

### 7.6.4 Watercourses and Aquatic Ecology

It will be important to provide measures to protect the receiving water courses during the construction and operation of the proposed development. A provision to prevent accidental spills of substances on the site from entering Spical Beck should occur. This will ensure that no significant impacts on the surrounding water courses occur during the construction or operation of the project.

#### *Reduction and Prevention of Suspended Solids Pollution*

The key factors in erosion and sediment control are to intercept and manage off and on-site runoff. This limits the potential for soils to be eroded and enter streams in runoff.

- Minimise risk of potential erosion by, where possible, planning construction activities during drier months;
- Retain existing vegetation where possible;
- Revegetate denuded areas, particularly cut and fill slopes and disturbed slopes as soon as possible;
- Cover temporary fills or stockpiles to minimise erosion;
- Divert runoff away from denuded areas;
- Minimise the length and steepness of slopes where possible;
- Minimise runoff velocities and erosive energy;
- Retain eroded sediments on site with erosion and sediment control structures;
- Access roads should be constructed or topped with a suitable coarse granular material/non-woven geotextile, and if possible topsoil should be stripped prior to access road construction;
- If possible, in-stream work should be avoided. If unavoidable keep in-stream work to a minimum and as far as possible protect the natural stream conditions and structure to promote stability of bank and bed structures and retain riparian vegetation;
- All water pumped from in-stream contained work areas should be discharged on a land site to allow sediment removal before it re-enters the river;
- Temporary stream diversions should be excavated in isolation of stream flow; and
- Permanent stream diversions should be completed as far in advance as possible.

Where the construction site is close to a watercourse, the following guidelines should be followed:

- Raw or uncured waste concrete should be disposed of away from the watercourse.
- Water site activities should be trapped on-site to allow sediment to settle out and reach neutral pH before clarified water is released from the site.
- Fuels, lubricants and hydraulic fluids for equipment used on the construction site should be carefully handled to avoid spillage, properly secured and provided with spill containment

- according to codes of practice. Any contaminated soil should be removed from the site and disposed of properly.
- Fuelling and lubrication of equipment should not be carried out on sites close to watercourses.
  - Waste oils and hydraulic fluids should be collected in leak-proof containers and removed from the site for disposal or recycling.
  - Prior to any in-stream work ensure that all construction equipment is mechanically sound to avoid leaks of oil, fuel, hydraulic fluids and grease.
  - Foul drainage from site offices etc. should be removed to a suitable treatment facility.

## 7.7 References

Gibbons, D.W., Reid, J.B. and Chapman, R.A. (1993) *The New Atlas of Breeding Birds in Britain and Ireland: 1988-1991*. T & AD Poyser

IEEM (2006) Guidelines for Ecological Impact Assessment in the UK, Institute of Ecology and Environmental Management, Winchester.

JNCC (2003) Handbook for Phase 1 Habitat Survey - a technique for environmental audit. Joint Nature Conservation Committee, Peterborough.

JNCC (2006) National Vegetation Classification users' handbook. Joint Nature Conservation Committee, Peterborough.

UK Biodiversity Action Plan Website (Accessed February 2007): <http://www.ukbap.org.uk/default.aspx>

Scarborough Local Biodiversity Action Plan Website (Accessed February 2007):  
<http://www.ukbap.org.uk/lbap.aspx?id=534>

Environment Agency (2007) Esk & Coastal Streams Catchment Flood Management Plan Inception Report, Section 4.3 The Natural Environment.

## 8.0 GEOLOGY AND SOILS

### 8.1 Introduction

This section deals with environmental issues associated with ground conditions relating to the proposed industrial development site at Enterprise Way, Whitby. For the purposes of this ES, ground conditions are taken to comprise:

- Geology and soils;
- Ground contamination; and
- Hydrogeology (groundwater).

This section should be read with reference to Figure 8.1 Drift Geology and Figure 8.2 Solid Geology. This section should also be read in conjunction with Section 6.0 Water Quality and Drainage and Section 7.0 Ecology and Nature Conservation.

### 8.2 Assessment Methodology

The polluting potential of any proposed industrial/urbanised area exists during construction, operation, demolition and restoration. The construction phase includes the construction of access roads, structural foundations and any other site infrastructure. Construction will include the removal of topsoil and a disruption to the natural drainage of the site.

A study of the area was carried out using the following methods:

- Reference to Regional Spatial Strategy The Yorkshire and Humber Plan December 2005;
- Reference to Geology of the North York Moors – North York Moors National Park;
- Planning Policy Guidance 25: Development and Flood Risk; and
- Reference to Hymas Site Services Geotechnical Report (Report No. GMA/6856.03).

Information was collected by undertaking a desk study. As part of the commissioning of the development, an intrusive ground investigation was undertaken (mainly for geotechnical purposes). This investigation will include, where applicable, an assessment of the soil and groundwater conditions at locations of known or suspected ground contamination, in addition to gas monitoring if required.

Geological and soils information was determined from the Environment Agency Esk And Coastal Streams Catchment Flood Management Plan (CFMP) publication.

### 8.3 Existing Baseline Conditions

The current ground conditions within the proposed development site are described below and likely effects of the development on potentially sensitive receptors assessed. These impacts have been divided into two categories:

- Short-term construction impacts, and
- Permanent and operational impacts.

Residual impacts that are likely to remain after mitigation measures have been put in place, have been identified and assessed. Note that some of the conditions and effects described, particularly with regard to contamination and hydrogeology, may interact with other parameters such as ecology and surface water. Such interactions are described where appropriate.

The following sections provide details of present ground conditions at the proposed development.

## **Geology**

Geology can be sub-divided into solid and quaternary geology. Solid geology (pre-quaternary) deals with the bedrock geology while quaternary geology deals with the sub-soil deposits, deposited or formed within the last two million years.

The geology of the site has been determined from the published *Environment Agency – Esk and Coastal Streams CFMP – Understanding the Catchment* for drift and solid geology.

## **Designated Sites**

There are no sites designated for geological reasons within the proposed development site.

## **Drift Geology**

The proposed development site is contained in close proximity to a layer of poorly sorted sediment, this diamicton deposit consists of fine and large grains. It is matrix-supported sub-strata meaning that the smaller, finer grains support the large grains. The River Esk and a number of the larger becks have alluvial material on riverbeds and banks. Figure 8.1 shows the drift geology of wider region, covering the River Esk Catchment.

## **Solid Geology**

Bedrock beneath the proposed development site is comprised of dark grey shales (sedimentary rocks which are clay or mud based) known as Lias. These rocks are from the Jurassic era and are found along a significant portion of the sea front, forming the characteristic coastal cliffs in the region. Also found in close proximity to the proposed development site is a younger formation of mid-Jurassic Ravenscar Group consisting of alternating layers of shale, sandstone and limestone (oolite).

## **Soil**

The development site is located on land currently being used for agricultural purposes. On-site boreholes (8 in total) encountered topsoil depths of 0.250m to 0.350m consisting of predominately natural clay deposits, with 4 of the 8 boreholes indicating potential made ground within the clay deposits.

Soils and Agricultural Land Classification (ALC) classes are based largely on the climatic, topographic and soil type, altitude and slope characteristics of the land. The system seeks to measure the way in which these parameters interact to pose limitations upon the versatility and flexibility of the land to grow crops. ALC has five main classes of which three, four and five are sub-divided into two. Grade 1 is the highest grade and represents soils with no physical limitations to the range of crops that can be grown. Grade 5, the lowest grade, is severely constrained and would normally be limited to rough grazing.

Current European Union (EU) and UK Government policy stresses the importance of the retention of soil as an important natural resource. The EU has started measurements for protecting soil in Europe. In a Communication called "Towards a Thematic Strategy for Soil Protection" (16/4/2002), the Union outlines the need to conserve and protect the soils of Europe as they come under increasing threat. The Communication identifies agricultural land as being of great importance and its viability must be secured for the future.

In order to protect the soils of Europe, the Union proposes the development of an EU-wide soil protection policy that would include a series of environmental measures designed to prevent soil contamination. In addition, it proposes the establishment of soil monitoring legislation, as well as calling on Member States to be more aware of soil protection in future developments and policies that may hamper its status. The Communication identifies the need for action to be taken on a local basis, in addition to national and EU-wide.

## **Mineral Resources**

There are no active or potential mineral resources within the proposed development site.

## Hydrogeology and Groundwater Abstractions

Movement of groundwater in the Esk Catchment is generally confined to minor aquifers formed in the Ravenscar Group formation, made of sandstone and limestone. The proposed development is located in a Minor Aquifer of Low Vulnerability. These formations are not regarded as holding significant quantities of groundwater. These formations and their overlying soils have the ability to replenish groundwater recharge elsewhere in the catchment due to surface run-off levels.

Boreholes (8 in total) were excavated to 6.0 m in depth with all holes terminating in clay deposits and remaining dry during excavation operations.

## 8.4 Impacts

There are no designated sites within or close to the proposed development or in the vicinity and therefore there will be no direct impact on such sites during construction. In addition, there are no mineral extraction activities being undertaken within or close to the site and therefore construction activities are unlikely to impede any such operations. Furthermore, there are no areas of significant mineral resources that have been identified that will be affected by construction works. The development will entail the loss of soils from the site. Landscaping measures may be employed around the development site, which will utilise a portion of the topsoil removed from the site.

### Geology

The proposal will have an indirect impact on the natural drainage of the study area. Potential impacts include altering the hydrogeology of the area, diverting underground stream flows, or preventing aquifer recharge. Drift and bedrock geology should not be adversely affected.

### Soils

The proposed development will have direct and indirect impacts on the physical and chemical characteristics of local soils and on the biological processes, which contribute to the soil formation process.

Characteristics of the soil which are likely to be impacted upon by the proposed development include drainage, structure, texture, pH and organic content. Many of these characteristics are interdependent therefore, changes to one, will usually influence other characteristics or soil properties.

### Hydrogeology

There could be a risk to groundwater from construction activities. This includes run-off or accidental spillage of substances such as hydrocarbons, hydraulic fluids, solvents, or other substances that could enter shallow groundwater and find their way into the River Esk. Section 6.0 Water Quality and Drainage highlights pollution prevention guidelines (PPG) in relation to spillage and surface water runoff.

## 8.5 Mitigation

Mitigation of construction impacts will depend on development and adherence to good practice and should emphasise environmental protection.

A management plan will be developed prior to commencement of site works and will ensure that construction activities take place in accordance with all relevant legislation for the protection of surface water and groundwater, codes of good practice as well as best practice guidance for works on or near water, such as the Pollution Prevention Guidelines prepared by SEPA. (Refer to Mitigation Measures detailed in Section 7.5 Mitigation contained in Chapter 7.0 Water Quality & Drainage).

There will be no residual impacts on designated geological sites within or close to the site. The impact is therefore negligible. Damage to soils during construction is unavoidable.

## 8.6 Residual impacts

The proposed development will affect the existing situation and soils will be disrupted during construction. Adherence to mitigation measures set out in Section 8.5 should ensure the risk of a pollution event during construction is minimised.

## 8.7 References

DMRB (2000) *Design Manual for Roads and Bridges Volume 11: Environmental Assessment*. The Stationery Office, London, UK.

Environment Agency – [www.environment-agency.gov.uk](http://www.environment-agency.gov.uk)

Geology of the North York Moors – North York Moors National Park

Regional Spatial Strategy - The Yorkshire and Humber Plan December 2005

SEPA (Scottish Environmental Protection Agency) (1996) *Guidelines for Water Pollution Prevention from Civil Engineering Contracts*. Scottish Environmental Protection Agency.



## 9.0 LANDSCAPE & VISUAL IMPACT

### 9.1 Introduction

This report sets out to make an assessment of the landscape and visual impacts associated with the construction of proposed industrial units at Enterprise Way, Whitby. The assessment begins with a description of the existing landscape setting and visual resources to establish baseline conditions. The proposed development is applied to the baseline and the impacts of the development scheme upon the existing landscape setting and visual resources are then predicted. Where necessary, mitigation measures are then described to address negative impacts.

### 9.2 Methodology

#### General Approach

The landscape and visual assessment methods are derived from the *Guidelines for Landscape and Visual Impact Assessment* (The Landscape Institute and Institute of Environmental Management & Assessment, 2002). The landscape has been appraised to allow it to be described and classified into landscape character areas that in turn enable the classification of landscape quality. The capacity of the landscape to accept change of the type proposed is assessed by determining each landscape character areas sensitivity. Overall key landscape components are normally landform, vegetation and historical and cultural components. Landform relates to topography, drainage characteristics and geology. Historical and cultural components include historic landscapes, listed buildings, conservation areas and historic designed landscapes. Vegetation plays an important role in how the landscape and visual resources of an area are viewed and is an integral component of a landscape character.

Assessment was undertaken through analysis of up to date digital copies of OS Discovery Series raster and OS vector maps and aerial photography, in conjunction with detailed drawings of both of the proposed schemes. Site visits were undertaken during Winter 2006 to assess the existing environment and to establish the landscape and visual impacts that may be associated with the proposed scheme.

Existing visual resources are established along with sensitive receptors, i.e. residential properties, scenic viewpoints and visitor amenity areas.

#### Landscape Assessment Methods

The following text describes the key terminology used in the landscape assessment.

##### *Landscape Resource*

The combination of elements that contribute to landscape context, character and value.

##### *Landscape Value*

The relative value or importance attached to a landscape that expresses national, regional or local consensus because of intrinsic characteristics.

##### *Landscape Character*

The distinct and homogenous pattern that occurs in the landscape reflecting geology, landform, soils, vegetation and mans impact.

##### *Landscape Quality*

The assessment of the landscape quality assesses the value of the landscape in relation to its rarity, location and landscape character attributes. In general, the higher the quality of landscape the more sensitive it will be to change.

Based on information gathered as part of the classification of the landscape, it is possible to assess the landscape quality of the study area using a 5-point scale as follows:

- Highest quality - the landscapes of highest quality are, by definition, landscapes of an 'awe inspiring' or 'sublime' nature and are important on an international and national level.
- Very attractive - this definition relates to landscapes which are still of high value nationally and can be defined as highly scenic.
- Good landscape - this category contains areas that, although still attractive, have less significant and more common landscape features.
- Ordinary landscape - this category contains areas that have only common landscape features and some intrusive elements such as conspicuous infrastructure with scope for improvement in management.
- Poor landscape – this category includes areas that contain frequent detracting aspects and/or lack of management results in a degraded landscape with very few valued features.

**Landscape sensitivity** is used to establish the capacity of the landscape to accommodate the type of development proposed and is defined as follows:

- High** Highest/Very Attractive landscape quality with highly valued or unique characteristics susceptible to relatively small changes;
- Medium** Good landscape quality with moderately valued characteristics reasonably tolerant of changes;
- Low** Ordinary/Poor landscape quality with common characteristics capable of absorbing substantial change.

**Magnitude of Landscape Resource Change:** Direct resource changes on the landscape character of the study area are brought about by the introduction of the proposal and its effects on the key landscape characteristics. The categories and criteria used are described in Table 9.1.

**Table 9.1 Criteria for Magnitudes of Landscape Resource Change**

Category	Criteria
High	Total loss or alteration to key elements of the landscape character, which result in fundamental and / or permanent long-term change.
Medium	Partial or noticeable loss of elements of the landscape character and / or medium-term change.
Low	Minor alteration to elements of the landscape character and / or short-term/ temporary change.

**Significance of Landscape Impact:** The level of significance of impact on landscape character is a product of landscape sensitivity and the magnitude of change in landscape resource as indicated in the Table 9.2.

**Table 9.2 Significance of Landscape Impact**

Magnitude of Landscape Resource Change	Landscape Sensitivity		
	Low	Medium	High
No change	No change	No change	No change
Low	Slight	Slight / moderate	Moderate
Medium	Slight / moderate	Moderate	Moderate / substantial
High	Moderate	Moderate / substantial	Substantial

**Visual Assessment Methods**

The following text describes the key terminology used in the visual assessment.

*Visual Amenity*

Visual amenity is the value of a particular area or view in terms of what is seen by the viewer. This value may be influenced by the physical condition of the landscape viewed and the contribution the characteristics of the view make to the local environment.

*Visual Resources*

Visual resources are the overall key elements/features/characteristics that combine to make a view.

*Viewer Sensitivity*

Viewer sensitivity is a combination of the sensitivity of the human receptor (i.e. resident; commuter; tourist; walker; recreationist; or worker) and the quality of view experienced by the viewer. Typical criteria for the categories of viewer sensitivity used in this assessment are provided in Table 9.3.

**Table 9.3 Criteria for Categories of Viewer Sensitivity**

Category	Typical criteria
High sensitivity	eg users of an outdoor recreation feature which focuses on the landscape; valued views enjoyed by the community; tourist visitors to scenic viewpoint; occupiers of residential properties with a high level of visual amenity.
Medium sensitivity	eg users of outdoor sport or recreation which does not offer or focus attention on landscape; occupiers of residential properties with a medium level of visual amenity.
Low sensitivity	eg regular commuters, people at place of work; occupiers of residential properties with a low level of visual amenity.

**Magnitude of Visual Resource Change:** the magnitude of change in visual resource or amenity results from the scale of change in the view with respect to the loss or addition of features in the view and changes in the view composition, including proportion of the view occupied by the proposed development. Distance and duration of view must be considered. Other infrastructure features in the landscape and the backdrop to the development will all influence resource change. The criteria for the magnitude of visual resource change used in this assessment are provided in Table 9.4.

**Table 9.4 Criteria for Magnitudes of Visual Resource Change**

Category	Criteria
High	Total loss or alteration to key elements/ features/ characteristics of the existing landscape or view and/or introduction of elements considered totally uncharacteristic when set within the attributes of the receiving landscape or view.
Medium	Partial loss or alteration to key elements/ features/ characteristics of the existing landscape or view and/or introduction of elements that may be prominent but not necessarily substantially uncharacteristic when set within the attributes of the receiving landscape/view.
Low	Minor loss or alteration to key elements/ features/ characteristics of the existing landscape or view and/or introduction of elements that may not be uncharacteristic when set within the attributes of the receiving landscape/view.
No change	Very minor loss or alteration to key elements/ features/ characteristics of the existing landscape or view and/or introduction of elements that are not be uncharacteristic when set within the attributes of the receiving landscape/view.

**Significance of Visual Impact:** Significance of visual impact can only be defined on a project by project basis responding to the type of development proposed and its location. The principal criteria for determining significance are magnitude of visual resource change and viewer sensitivity.

Table 9.5 illustrates significance of visual impact as a correlation between viewer sensitivity and magnitude of visual resource change.

**Table 9.5 Significance of Visual Impact**

Magnitude of Visual Resource Change	Visual Sensitivity		
	Low	Medium	High
No change	No change	No change	No change
Low	Slight	Slight / moderate	Moderate
Medium	Slight / moderate	Moderate	Moderate / substantial
High	Moderate	Moderate / substantial	Substantial

**Zone of Visual Influence (ZVI)**

The visual assessment is assisted by the production of a ZVI. The ZVI is the area within which views of the proposed development and associated works during construction and operation can be obtained. The extent of the ZVI is determined primarily by the topography of the area.

The ZVI is then refined by field studies to indicate where relevant buildings, woodlands, hedges or other local features obscure visibility from the main roads, local viewpoints/landmarks and settlement etc and it is through such field studies that prediction of visual impacts take place. The ZVI for the proposed road scheme is illustrated in Figure 9.1.

## 9.3 Existing Environment

### Landscape Context

For the purpose of the landscape assessment the study area is contained within the potential visual envelope for the proposed scheme.

The proposed site is located on lands adjacent to an existing industrial estate on Stainsacres Lane A171 on the south eastern side of Whitby in North Yorkshire. Whitby is a coastal town located 25 miles north of Scarborough and 40 miles south of Middlesbrough. Whitby is an historic town that has grown around the mouth of the River Esk. The sheltered harbour is located adjacent to the headlands and steep river valley created actions of the sea and the river. The coast consists of cliffs and headlands that offer extensive views along the coast and inland to the moors. The headland east of the town has been used as the site for Whitby Abbey, Cholmley House and St Mary's Church that are dramatic and prominent landmarks overlooking Whitby and the coast. Development is found on both sides of the River Esk but the majority of the Whitby townscape is found on the western side of the river.

Whitby is located adjacent the North Yorkshire Moors National Park. The National Park was designated in 1952 and contains the largest tract of open heather moorland in England. The National Park also includes such diverse landscapes as coastal cliffs, river valleys, managed farmland, woodland and forests and blanket bog.

Further, the Countryside Commission designated the coastal areas of the National Park as part of the North Yorkshire and Cleveland Heritage Coast in 1974.

The immediate surroundings of Whitby consist of undulating improved agricultural lands that are predominantly used of pasture.

The A171 road extends east to west through Whitby from Scarborough to Middlesbrough. The A169 runs south from Pickering to Whitby crossing the River Esk at Sleights. The A174 follows the north east coast extending from Whitby to Middlesbrough.

### Landscape Character

A number of documents have been published that assist in an appreciation of the landscape character of the area surrounding the proposed development site. The Countryside Commission has published *"Countryside Character Volume 3: Yorkshire & The Humber (1999)"* that includes a landscape character area (LCA) that the proposed development is located within. The North Yorkshire Moors and Cleveland Hills Landscape Character Area (Landscape Character Area 25 – Appendix 9.1) is one of 181 regional scale character areas jointly identified by the Countryside Commission and English Nature. The key characteristics of the North Yorkshire Moors and Cleveland Hills LCA 25 are described by the Countryside Commission as follows;

- Upland plateau landscape underlain mainly by sandstone and mudstone and in the south calcareous sandstone and limestone with areas of undulating land arising from deposits of glacial till.
- Upland plateau dissected by dales and often broad sweeping but steep sided river valleys.
- Extensive areas of heather moorland on plateau and hills creating a sense of place, expansiveness and openness.
- Arable landscape to the south and east with pasture on elevated plateau and hills.
- Sparsely settled with population concentrated in dales and around fringes.
- Panoramic views over moorland ridges, dales surrounding lowlands vales and the sea.
- Traditional stone walls and hedgerows enclosing fields in the dales and lower fringe farmland.

- Distinctive and dramatic coastal landscapes with high cliffs, small coves and bays, coastal towns and fishing villages.

The Countryside Commission describe the landscape character of LCA 25 as a clearly demarcated block of high land in the north east of the counties of Yorkshire and Cleveland. The most notable feature is described as the expansive sweep of enclosed, predominantly heather moorland with long panoramic views in all directions that creates a strong sense of place, expansiveness, openness and solitude/wilderness. The sense of wilderness is enhanced by the limited number of roads that cross the upland plateau. The upland is stated as extending eastwards to one of the highest stretches of cliff along England's North Sea Coast where the proximity of the sea to the high moors and sheltered dales adds to the character. The coastline itself is said to be dramatic with precipitous cliffs dipping down in places to sandy and rocky shores. Small fishing villages cling to the steep valley sides in sheltered locations.

Whitby is described as one of the main market towns within LCA 25 with an economy based on tourism and fishing. In particular the Victorian influences on Whitby as well as Saltburn and Scarborough are noted. The tight-knit fishing villages are said to have arose later than inland villages. Dwellings within the coastal villages are tightly packed together in narrow valleys leading down to bays. Largely without gardens and built almost on top of each other the houses are connected by alleys and stepped lanes.

The description of broad landscape characters within the Countryside Commissions character areas have been subdivided into local landscape character types and areas within the *North York Moors National Park Landscape Character Assessment (2003)*. The North York Moors LCA has classified the National Park into 9 distinctive landscape character types and 31 landscape character areas (See Appendix 9.2 – North York Moors Landscape Character Map). The key characteristics of each landscape character type and area are described. The significance of existing pressures on the landscape are assessed. From a review of the North York Moors LCA the proposed site lies within the Coast and Coastal Hinterland Landscape Character Type (Ref 4) and the Whitby – Cloughton LCA (Ref 4b).

The relevant key characteristics of the Coast and Coastal Hinterland Landscape Character Type (Ref 4) are summarised as follows;

- Undulating or rolling coastal and coastal hinterland underlain by Deltaic sandstones and mudstones overlain by deposits of boulder clay used for intensive farming. Elevated areas allow panoramic long distance views.
- Drained by a series of steeply incised and winding minor becks that flow towards the sea.
- Broad bays interspersed with rugged indented cliffs that are home to wildlife and renowned for their geological importance.
- Inland the mainly arable farmland is interspersed with pasture and forestry plantations. The mostly regular fields are enclosed by mixture of trimmed hedgerows, neat stone walls and fences creating a bleak appearance.
- Characteristic coastal settlements are crowded into tight cliff foot locations or confined in narrow valleys where they meet the sea. Buildings are mostly three storey built in stone, brick or rendered finish with pantile or slate roofs accessed by narrow streets or footpaths only. Modern expansion on to the adjacent flatter cliff top areas is generally unsympathetic.

A review of the Pressures for Change that this landscape character type is under for development has found that the North York Moors LCA states that there is concern about the impact of cumulative effect of changes in the physical fabric of settlements through creeping suburbanisation of settlements, inappropriate planting and loss of trees. The degree of pressure is stated as high and the significance of the pressure on the landscape character is also stated as high for residential development with the National Park. In terms of development pressures generally the North York Moors LCA the assessment states that there is potential for a reduction in tranquillity, solitude and wilderness. Further there is a potential for a loss of unspoilt character and a sense of historic continuity. The degree of pressure of development is stated as medium. The significance of the pressure on this landscape character is stated as low.

The relevant key characteristics of the Whitby – Cloughton Landscape Character Area (Ref 4b) are summarised as follows;

- Rolling coastal and coastal hinterland area rising to a height of 233m. Coastal areas are designated as part of the North Yorkshire and Cleveland Heritage Coast.
- Elevated areas allow long distance views across the area and out to sea.
- Spectacular and rugged crumbling cliffs reaching a maximum height of 150m at Ravenscar subject to collapse that has resulted in undercliffs resting on harder rocks below.
- Area drained by a series of steeply incised and winding becks that flow towards the coast or towards the River Esk. Steep valley sides are frequently lined with woodland.
- Regular fields of recent enclosure are subdivided by neatly trimmed hedges, stone walls or fence. Occasional trees appear stunted and wind blown creating a bleak appearance.
- The busy A171 crosses this LCA frequently in elevated and open locations and has significant visual intrusion effect on the area.
- A disused railway between Scarborough and Whitby now a cycle track runs close to the coast and the Cleveland Way follows the cliff top.
- Detractors include the mast south of Whitby, traffic associated with the A171, scattered modern suburban style development and prominently located caravan sites.

The LCA has not been attributed a landscape value nor a landscape sensitivity rating and these important attributes are discussed in the text that follows.

### **Planning Policy Context**

The proposed development lies with the boundary of the North York Moors National Park Authority. The National Park Authority have prepared the North York Moors Local Plan 2003 that has a number of policies related to this landscape and visual impact assessment.

At a strategic level the plans objective with regard to landscape is;

- To maintain and enhance the scenic character of the North York Moors;
- To safeguard the "spirit of the place" and be aware of the elements that make up the place including; wilderness; tranquillity; space; freedom; security; intimacy; season; atmosphere; memories; experiences; light; colour; sound; hue of day and night.
- To maintain and enhance the special landscape characteristics of distinct areas within the North York Moors.

NE6 Trees, Woodland, and Hedgerows and Walls sets out the plans policy were by the loss of such features caused by development (were such features are of landscape amenity or historical value) will only be permitted in certain cases.

BE1 Conservation Areas sets out the plans policy for such areas and states that there are a total of 41 Conservation areas within the plans boundary. Proposals for development in Conservation Areas will be required to preserve or enhance the character and appearance of the Areas. Further, BE4 Development Affecting The Setting of A Listed Building states that were unacceptable effects occur such development will not be permitted.

BE5 Historic Parks and Gardens states that proposals affecting historic parks and gardens of national significance will not be permitted where it has an effect on the character, appearance, amenity, setting or enjoyment of the site. There are four Historic Parks and Gardens registered on the English Heritage's Register namely; Armcliffe Hall; Duncombe Park; Mulgrave Castle and Rievaulx Terrace and Temples.

BE10 Landscaping sets out the plan requirements for incorporation of suitable landscape schemes to accompany permitted schemes.

A review has also taken place of the Whitby Local Plan 2003. It has been established that there is one policy of relevance to this assessment.

E.27 The Protection of Significant Views protects views of and from important landscape and townscape features. Special scrutiny will be applied to proposals effecting views of and from the North York Moors fringe, the coastal Zone and designated Conservation Areas. Any skyline intrusion would adversely effect the character of the landscape.

### **Countryside Access and Long Distance Footpaths**

Other than minor roads rights-of-way within the study area are generally infrequent. A large number of farm access tracks are present but generally these are private. An important exception is the long distance footpath/cycleway that extends from Whitby to Scarborough along the cliff tops known as Cleveland Way. There are several promoted walks within Whitby town around the harbour area.

### **Landscape Quality**

Landscape Quality can refer to the relative value that society attaches to different landscapes and the reasons for valuing them. Current Countryside Agency advice indicates six main criteria that can be used in the identification of valued landscapes; landscape as a resource, landscape quality, scenic quality, consensus of opinion regarding importance, conservation interests and other values. Further, the use of designations is an important tool of qualitative landscape valuation that is rigorous and objective. The condition of the landscape and level of intrusive elements are also important.

The proposed development site lies within an urban rural fringe landscape on the south east limit of development for Whitby. The A171 and linear development along its length to the limit of development for Whitby is a significant negative component of the landscape resource within the sites surroundings. Further the existing industrial units at Whitby Business Park are also a recognised component of the landscape resource. Although the proposed site is located within the North York Moors National Park establishing that the majority of the landscape within the National Park is valued at a national level this portion contains urban features that lower the landscape value at a local level. The majority of the industrial estate is located within the same National Park designation. This urban rural fringe landscape can not be described as unspoilt nor have the key characteristics that give the North York Moors their sense of place as outlined in the North York Moors Local Plan namely; wilderness; tranquillity; space; freedom; security; intimacy; season; atmosphere; memories; experiences; light; colour; sound; hue of day and night. The urban influences significantly reduce the scenic quality of this portion of the landscape.

This assessment considers that for the most part, the character of the local area is fairly undistinguished though not unattractive and overall the relative landscape quality of the Whitby – Cloughton Landscape Character Area in the vicinity of the proposed industrial units at Enterprise Way is "Good" as although still attractive, the local landscape is less significant and contains more common landscape features.

With regard to the wider landscape with distance from Whitby the distinctive characteristics of the Coast and Coastal Hinterland increase in frequency with a resultant increase in landscape quality. This portion of the landscape has been designated as both a National Park and as part of the North Yorkshire and Cleveland Heritage Coast. There are less intrusive elements and the scenic quality of the landscape benefits. The wider landscape character within the Whitby – Cloughton Landscape Character Area overall has a "Very Attractive" landscape quality as it is of high value nationally and can be defined as highly scenic.

### **Landscape Sensitivity**

The text above describing the landscape character and value of the landscape around the proposed site can be used to establish the sensitivity of this landscape to the type of development proposed. Consideration is given to the capacity and robustness of the site and local area. Landscape sensitivity



is the degree to which a particular landscape character type or area can accommodate change without unacceptable detrimental effects on character. At a local level the lands west of the site forms part of the townscape of Whitby with frequent buildings (some tall) that can interrupt views. However an open character remains to the east of the site. This urban rural fringe landscape east of Whitby has been established as having a medium landscape sensitivity due to the influence of urban development and it can not be disputed that this factor differentiates the local landscape from the remainder of the Whitby- Cloughton Coastal LCA.

With regards to the wider Whitby – Cloughton LCA with fewer intrusive features, an increase in characteristic openness, intimacy, space and wilderness elements prevails. At such locations there is no reference for development of the type proposed and this landscape would have difficulty in accommodating such industrial units without significant impacts. The wider Whitby – Cloughton LCA has been established as having a high sensitivity to the type of development proposed.

## **9.4 Predicted Impacts**

### **Landscape Character Impact Assessment**

An assessment of the significance of the impact of the proposed industrial units development on the landscape character of the area has been completed and summarised below.

#### **Direct Impacts on Whitby – Cloughton Landscape Character Area**

The proposed site lies entirely within the Whitby- Cloughton Landscape Character Area. The existing site consists of agricultural fields dominated by urban development of east Whitby. There are no mature trees that are worthy of protection and the site is bounded by low hedgerows. The proposals are consistent with the adjacent industrial units that are existing features of this landscape. The proposal will utilise the existing access to the A171. Further, the proposal will read as part of the existing business park and low levels of landscape resource change will occur as a result.

The landscape quality of this landscape has been identified as “Good”.

This portion of the Whitby-Cloughton LCA has been identified as having a medium sensitivity to change. The predicted magnitude of landscape resource change is low. The predicted significance of direct landscape impact on the Whitby-Cloughton LCA is slight/moderate negative.

#### **Indirect Impacts on Whitby – Cloughton Landscape Character Area**

The proposed industrial units are of reasonable scale and proportion that they will not be prominent features in the wider landscape. The units are similar in scale and appearance to the existing industrial units in Whitby Business Park. The wider landscape is extremely open in nature and has few prominent features. At distance from Whitby (from the remainder of the National Park) the proposed development will read as part of the townscape. The proposal does not breach the skyline. Further, a low ridgeline above Shawn Riggs Beck provides significant beneficial screening of the proposed site when viewed from the west within the majority of the National Park (See Viewpoint 6, 7 and 8).

The landscape quality of this landscape has been identified as “Very Attractive”.

The wider portion of the Whitby-Cloughton LCA has been identified as having a high sensitivity to change. The predicted magnitude of landscape resource change is no change. The predicted significance of direct landscape impact on the Whitby-Cloughton LCA is no change.

### **Visual Impact Assessment**

#### **Zone of Visual Influence**

The Zone of Visual Influence (ZVI) for the proposed schemes is illustrated in Figure 9.1 and supported by the Viewpoints 1 – 16 Appendix. The ZVI for the proposed site is limited to within 1km of the sites eastern boundary to the nature of the topography approaching the coast. This ridgeline results in extremely limited views towards the proposed site from the cliff tops/coastline. To the northeast and

east of the proposed site the built form of Whitby significantly restricts views. Indeed the majority of Whitby lies on the western side of the River Esk below a steep incised valley side to the east where no views to the existing industrial estate are possible. It is only in close proximity to the site that the built form of eastern Whitby permits views. To the south the topography gradually rises to form the Fylingdales Moor area within the North York Moors allowing long distance views towards the coast and Whitby. A number of low ridges located above Becks (Shawn Riggs Beck; Stainsacre Beck and Buskey Beck) that flow into the River Esk break up views towards the coast.

The visual impacts within the Zone of Visual Influence are assessed in the following sections.

### **Visual Impact on Residential Properties**

#### **Russell Hall Farm**

This two storey farmhouse is located close to the site's southern boundary. This property has side views across open pasture fields towards the proposed site. The existing view consists of open fields with a backdrop of industrial units. (See Viewpoint 16). Existing boundary trees and hedgerows will be retained. The proposed view will also consist of open fields with industrial units albeit closer to the farmhouse. The resultant magnitude of visual resource change is medium. The viewer sensitivity is medium. The predicted significance of visual impact for properties at Russell Farm Cottage is Moderate Negative.

#### **Stripes Farm**

This two storey farmhouse is located immediately east of the proposed site. A low ridge associated with a small stream between the site and the farmhouse provides screening particularly at ground level. Further there are well-maintained hedgerows and trees located between the farmhouse and the proposed site. The existing view consists of partially screened views across fields to industrial units. The proposal will be partially visible from upper floors of the farmhouse. The resultant magnitude of visual resource change is low. The viewer sensitivity is medium. The predicted significance of visual impact for properties at Stripes Farm is Moderate Negative.

#### **Hall Farm**

This farmhouse is located on the northern edge of Stainsacre and has views across untidy fields and the existing A171 towards the proposed site. Existing industrial units are visible. (See Viewpoint 2). The proposals will be partially visible through trees and will read with the existing industrial units. The viewer sensitivity is low. The resultant magnitude of visual resource change is low. The predicted significance of visual impact for properties at Hall Farm is Slight Negative.

#### **Properties at east of Hawsker Lane**

A series of farmhouses are located on the eastern side of Hawsker Lane. Due to the nature of the topography, stone walls and intervening vegetation it will not be possible to view the proposals from these properties (See Viewpoints 11, 12, 13, 14 and 15). The viewer sensitivity is medium. The resultant magnitude of visual resource change is no change. The predicted significance of visual impact for properties at on the eastern side of Hawsker Lane is No Change.

#### **Broomfields**

This farmhouse sits on an elevated site with a view east across the A171 road towards the existing industrial estate. A portion of the new units will be located to the rear of existing units when viewed from this property. The existing units are a significant component of the existing visual resource although the proposed units will slightly widen the proportion of units visible. The viewer sensitivity is low. The resultant magnitude of visual resource change is low. The predicted significance of visual impact for Broomfields is Slight Negative.

#### **Stainsacre Village**

This small village is located south of the proposed site. Site survey has established that it is not possible to view the proposed site from the majority of properties in Stainsacre. Hall Farm prevents views for a number of properties and the rest of the village faces towards Stainsacre Beck away from the site. The predicted significance of visual impact for properties at Stainacres is No Change.

### **Views from Class A and Motorway Roads**

The nearest Class A road to the proposal is the A171 Stainsacre Road that passes along the sites western boundary. This road is a single carriageway at this location. As exhibited by the ZVI in Figure 9.1 views from the A171 to the north and south of the proposals are restricted to within close proximity due to topography. The view from the south direction is further restricted by the location of Russell Hall Farm. The majority of the A171 as it passes north and south of Whitby will have no views of the proposal. Direct views into the site are visible from the road length contingent with the site although embankments and roadside vegetation partial screen views at some locations. The speed limit is 60/40 mph. The view is direct but brief. From such views the proposal will read with adjacent industrial/business unit developments. The view is intermittent. Overall the viewer sensitivity is medium and the magnitude of change in visual resource will be low. The predicted significance of visual impact on the views from the A171 Stainsacre Road will be slight/moderate negative.

Due to distance and topography/built development site appraisal has established that it is not possible to view the proposals from the remainder of the A171 that lies to the north and south.

The A169 is located approximately >4km west of the proposed site crossing the River Esk at Sleights. Several sections of this road have elevated views towards the coast that will have the proposed site contained within as a very minor visual component. Viewpoints 9 and 8 exhibit that it extremely difficult to notice the existing industrial/business units from such locations. The speed limit is 60 mph. From such views the proposal will read as part of the wider landscape. Overall the viewer sensitivity is medium and the magnitude of change in visual resource will be no change. The predicted significance of visual impact on the views from the A169 Road will be No Change.

### **Views from Class B Roads**

There are two Class B roads with potential views of the proposed scheme namely the B1416 and B1410.

The B1416 extends along a north to south axis approximately >2km west of the proposal at its nearest around Sneaton. As can be observed by Viewpoint 6 there is a low ridgeline above Shawn Riggs Beck and Stainsacre Beck that prevent views of the proposed site. Further the remainder of the B1416 north of the River Esk has roadside development that prevents views towards the proposed site. The viewer sensitivity is high and the magnitude of change in visual resource will be No Change. The predicted significance of visual impact on the view from the B1416 (near Sneaton) will be No Change.

The B1410 road extends west from Whitby until the junction of the A169 and the A171. It is not possible to obtain views of the proposals from the B1410 due to distance of view (>4km) and intervening development and topography. The viewer sensitivity is low and the magnitude of change in visual resource will be No Change. The predicted significance of visual impact on the view from the B1410 will be No Change.

### **Views from Minor Roads**

The nearest minor road to the proposals is the Hawsker Lane that runs east of the proposed site from the A171 to the Abbey. This road has stone walls at its roadside that restrict views from vehicles. Glimpse views towards the proposals and the existing units are available where gaps occur. (See Viewpoints 10, 11, 12, 13, 14 and 15). The viewer sensitivity is high. The magnitude of change in visual resource will be low. The predicted significance of visual impact on the view from the Hawsker Lane will be moderate negative.

Back Lane is located Hawsker and the A171 approximately >2km south. This lane is slightly elevated above the lower lying coastal areas and overlooks Intake Beck and Stainsacre Beck. However, as shown by Viewpoint 3 intervening topography and vegetation prevents views of the proposed site. The viewer sensitivity is high. The magnitude of change in visual resource will be No Change. The predicted significance of visual impact on the view from the Back Lane will be No Change.

Similarly Pasture Field Lane is also elevated above the coastal areas at a distance of >4km west of the proposed site. The existing industrial estate buildings are partially visible but only just noticeable. (See Viewpoint 7). The new buildings will similarly be only just visible and at this distance no discernible change in visual resource will occur. The viewer sensitivity is high. The magnitude of change in visual resource will be No Change. The predicted significance of visual impact on the view from the Pasture Field Lane will be No Change.

### **Impact on Planning Designations**

With regards to the policies described in the North York Moors Local Plan 2003 it has been established that the proposals will not result in the loss of any trees, woodland or walls of visual amenity or historical importance (Policy NE6).

The proposals are not in close proximity to nor cause any direct or indirect impacts on the designated Conservation Areas (Policy BE1).

The scheme is remote from the four listed Historic Parks and Gardens (Policy BE5).

A detailed landscape planting plan accompanies this planning application and therefore the scheme is consistent with Policy BE10.

With respect to the Whitby Local Area Plan 2003 the proposals are not located on a skyline nor do they cause any impacts on significant views from Whitby. The proposed scheme therefore does not impact on Policy E.27.

### **Countryside Access and Long Distance Footpaths**

The long distance footpath/cycleway that extends from Whitby to Scarborough along the cliff tops known as Cleveland Way is located on a dipping slope that faces away from the proposed site towards the sea. The footpath has been visited and due to topography there are no views available of the proposed site from the majority of this footpath system. The footpath leads to the Abbey that has elevated views in the direction of the proposed site. However, as can be observed from Viewpoint 10 it will not be possible to view the proposals from the Abbey due to topography and existing vegetation. The predicted significance of visual impact on the view from the Cleveland Way will be No Change.

There are several promoted walks within Whitby town around the harbour area. Due to the location of the footpaths around the harbour area it will not be possible to view the proposed development from these promoted walks.

## **9.5 Mitigation**

**No significant landscape and visual impacts have been predicted as a result of this assessment.** The following text outlines the recommended principles that should be applied in developing the proposal.

### **Landscape Mitigation Aims and Objectives**

Mitigation measures are those taken to help reduce the impacts arising from any visually intrusive or insensitive elements within the existing landscape setting.

### **Landscape Aims**

The physical and visual integration of the proposed scheme and associated features into surrounding landscape.

Screening to minimise visual intrusion and to reduce any significant negative aspects regarding the visual impact of the proposals on sensitive receptors.

### General Objectives

- Reduction of impact on views from the east of the proposed site.
- Retention of the existing trees vegetation.
- Creation of a quality landscape setting for the new development to allow it to blend with its surroundings particular its boundary with the open countryside.

### Planting

#### *Woodland Framework Planting*

It is recommended that a framework of woodland planting be provided particularly on the sites eastern and southern boundaries. See landscape planting plan Drawing Number ????????

It is recommended that as many of the existing trees on site should be retained and protected in accordance with BS 5837:2005 "Trees in relation to construction. Recommendations".

### Management and Maintenance

Maintenance of the landscape works will be an integral part of the on-going site management. This will include a defects liability period during which any defective plant material is to be replaced. Litter picking and weed control shall be carefully monitored during the early growing seasons of the landscape maintenance contract. Contractors will comply with all health and safety standards, in particular with regard to maintenance works during the operational phase of the scheme.

### 9.6 Conclusion

A landscape and visual impact assessment has been completed to establish the impact of the proposed scheme on the landscape and visual resources of the environs of the site at Stainsacre Road. No significant landscape or visual impacts have been predicted. When viewed from the surrounding landscape (where views are available) the proposal will read as part of adjacent industrial estate developments and low levels of visual resource change will result. In terms of landscape and visual assessments the proposals are acceptable as this urban fringe landscape has the capacity to absorb a development of this type without detrimental impact on the North Moors National Park landscape.

## **10.0 AIR QUALITY**

### **10.1 Introduction**

The planning application proposes the extension to an existing industrial estate. The proposed development will include business and industrial units. The proposed development will increase local traffic. Vehicle exhaust emissions will therefore increase local air pollution. The change in air pollution arising from the development has the potential to affect existing sensitive receptors in the area.

#### **Potential Adverse Impacts**

Air pollution from road traffic can affect human health through inhalation of toxic gases and particles.

Dust generated during the construction of the units has the potential to affect existing sensitive receptors around the development site, by increasing airborne particle pollution and dust deposition.

#### **Scope of Assessment**

This air quality impact assessment considers the likely impacts of the increased traffic associated with the development on the receiving environment.

The potential air quality impacts of dust from construction operations associated with the development have not been quantitatively assessed. Necessary mitigation measures to be adopted during construction are outlined in section 10.5.

## **STANDARDS AND METHODS**

### **Air Quality Standards**

EC Directive 96/62/EC on ambient air quality assessment and management established a framework through which the European Union will agree limit or target values for air pollutants. The limits within the EC Directive were implemented by the Air Quality Limit Value Regulations.

The Limit Value Regulations set air quality standards for a range of air pollutants including NO<sub>2</sub>. The UK Government has published an Air Quality Strategy which sets out how the Government proposes to fulfil the UK's obligations under the Air Quality Directive.

The Air Quality Strategy includes more exacting objectives for some pollutants. The Air Quality Strategy (AQS) for England, Scotland, Wales and Northern Ireland sets out the policy, targets and objectives for air pollutants up to 2010. These objectives have been implemented by the Air Quality Limit Values Regulations (England & Wales) 2002 as amended.

The Air Quality Regulations specify the objectives and target dates for four pollutants. These are lead, nitrogen dioxide, particles (PM<sub>10</sub>) and sulphur dioxide. The air quality objectives for England are presented in Appendix 10.1. This assessment refers only to UK air quality objectives, as compliance with the UK objectives will also meet the less demanding European Air Quality Limit Values.

### **Environment Act 1995**

Part IV of the Environment Act 1995 requires local authorities to review and assess local air quality. The local authority is obliged to take any potential exceedance of air quality objectives into account. Where the air quality objectives are likely to be exceeded then the relevant local authority must declare an air quality management area. Under the guidance to local authorities published by DEFRA, local authorities are required to carry out a staged assessment of local air quality.

The Technical Guidance to local authorities for the review and assessment of air quality was updated in February 2003<sup>1</sup>. This Guidance sets out the methods to be used to determine if the air quality objectives up to the year 2010 are likely to be achieved.

<sup>1</sup> DEFRA (2003) Review and Assessment Technical Guidance TG(03).

Updating and Screening Assessments have been carried out by Scarborough Borough Council as part of the Review and Assessment of air quality required by DEFRA, in fulfilment of the Council's statutory duty imposed by the Environment Act 1995.

### **Scarborough Borough Council's Review and Assessment**

Scarborough Borough Council has completed a three-stage Review and Assessment<sup>2</sup> of air quality within the Borough which extends from Filey, south of Scarborough, along the north Yorkshire Coast to Staithes in the north. The Review and Assessment process has identified the sources of air pollution in the Borough and confirmed one Air Quality Management Area in Staithes, due to elevated levels of smoke and SO<sub>2</sub> from domestic fuel use. Scarborough Borough Council was consulted as part of the assessment process. Details of the consultation are contained within Appendix 10.2.

### **Sensitive Receptors**

According to the Guidance in TG(03), air quality objectives should apply to all locations where members of the public may be reasonably likely to be exposed to air pollution for the duration of the relevant objective. Thus short term standards such as the 1 hour objective for NO<sub>2</sub> should apply to pedestrians in public areas which may be frequented by the public even for a short period of time.

Longer term objectives such as the 24 hour or annual means for NO<sub>2</sub> and PM<sub>10</sub> should only apply at houses, schools and other locations which the public can be expected to occupy on a continuous basis. These objectives do not apply to exposure at the workplace.

### **PPS 23 Planning and Pollution Control**

PPS 23<sup>3</sup> makes it clear that ".....any consideration of the quality of land, air or water and potential impacts arising from development, possibly leading to impacts on health, is capable of being a material planning consideration, in so far as it arises or may arise from or may affect any land use."

PPS 23 emphasises that "the planning system plays a key role in determining the location of development which may give rise to pollution, either directly or indirectly, and in ensuring that other uses and developments are not, as far as possible, affected by major existing or potential sources of pollution."

PPS 23 requires that the findings of reviews and assessments conducted by local authorities in fulfilment of their obligations under the Environment Act 1995 should be taken into account, both in the development of the local plan and through the development control process.

### **Site Assessment Criteria**

The assessment criteria used in this study are set out in Table 10.1. The short-term 1 hour concentrations of NO<sub>2</sub> are unlikely to be exceeded and have not been assessed further. Other traffic related air pollutants such as Carbon Monoxide, Benzene and 1-3 butadiene are unlikely to exceed any air quality objective and have not been assessed.

<sup>2</sup> Scarborough Council Review and Assessment (Update) 2004.

<sup>3</sup> ODPM (2004) Planning and Pollution Control

**Table 10.1 Assessment Criteria**

Pollutant	Time period	Justification
NO <sub>2</sub>	Annual mean	The Review and Assessments conducted by Scarborough Borough Council indicate that traffic pollutants are unlikely to exceed the annual mean objective. The development has the potential to increase local pollution which could cause a deterioration of air quality.
PM <sub>10</sub>	Annual mean	

### Baseline Air Quality

Estimates of background pollution of PM<sub>10</sub> and oxides of nitrogen have been obtained from the DEFRA sponsored air quality archive. The data in Table 10.2 present the highest reported estimated background concentration within 2km of the proposed development site, centred on OS 491000, 509,000.

**Table 10.2 Background Estimates of Air Pollution – Whitby – 2010 Annual Mean ug/m<sup>3</sup>**

X	Y	NOx as NO <sub>2</sub>	NO <sub>2</sub>	PM <sub>10</sub> gravitational
489500	507500	10.2	7.96	13.2
489500	508500	10.8	8.44	13.7
489500	509500	12.4	9.71	14.3
489500	510500	12.4	9.69	14.2
490500	507500	10.2	8.02	13.3
490500	508500	10.9	8.56	13.7
490500	509500	12.0	9.42	14.2
490500	510500	11.8	9.25	14.0
491500	507500	10.4	8.12	13.3
491500	508500	10.9	8.56	13.7
491500	509500	11.1	8.70	13.8
492500	507500	10.4	8.17	13.2
492500	508500	10.5	8.22	13.3
<b>Max</b>		<b>12.4</b>	<b>9.71</b>	<b>14.3</b>

The estimated background pollution for the year 2023 has been obtained using the LAQM approved calculation procedure, for the year 2020<sup>4</sup>.

The year of assessment date assumes development will not be fully occupied before 2010, taking account of the likely planning permission, construction and property arrangements.

## 10.2 Methodology

### Justification for Approach

According to the assessment method in the Design Manual for Roads and Bridges: "Following a road scheme there may be localised changes in air pollution, either increases or reductions, in the immediate vicinity of all or part of the scheme, and changes may also occur in the air quality near to the existing road network. The DMRB Screening Method provides an initial test that is designed to establish whether a road scheme ought to be subjected to a more detailed air quality assessment."

The aims of this assessment are:

<sup>4</sup> The method for predicting future background concentrations does not extend beyond 2020.



- to consider the effects of the increased traffic associated with the new development on air quality at representative sensitive receptor locations and to assess these impacts in terms of relevant air quality standards. This assessment only considers impacts on Nitrogen Dioxide and particles, as these are the only pollutants likely to be significant in terms of human health; and
- to determine if a more detailed dispersion modelling assessment is required.

The approach used here is to rely on national estimates of background air pollution, estimate the emissions from road traffic from the predicted traffic for 2010 and the design year (2023) to predict pollutant concentration, using the DMRB spreadsheet prediction tool. This approach is consistent with the technical requirements of TG(03) and DMRB<sup>5</sup>.

The assessment considers the air quality impacts within the immediate vicinity of the proposed development in accordance with Stage 3 of DMRB. The regional effects have not been considered as the scheme is not likely to generate additional road traffic within the context of national policy.

### Scenarios Assessed

Four scenarios have been assessed:

- 2010 with baseline traffic;
- 2010 with proposed development;
- 2023 with baseline traffic; and
- 2023 with proposed development.

The traffic flows used for the assessment are summarised in Table 10.3. This provides the 24 hour annual average daily traffic flows for the years 2010 and 2023.

**Table 10.3 Traffic Flows**

Scenario	Year	Location of Traffic Count on A171	Both Directions
baseline	2010	north of site	7666
		south of site	7324
	2023	north of site	9043
		south of site	8637
scheme	2010	north of site	8403
		south of site	7482
	2023	north of site	9779
		south of site	8798

The assessment assumes a traffic speed of 65 kph on the A171. All traffic is assumed to be 8% HGV based on the average reported survey data within the study area. The traffic data used in the assessment are provided in Appendix 10.3.

The flows for all scenarios have been considered as a single two-way road. The distances from the route centre-line to the receptor locations were obtained using a map at 1:1250 scale using a Geographical Information System (GIS) program. The existing and proposed scenarios have been modelled as A class roads as defined by the method. Air quality impacts have been assessed at three representative receptors to the north of the junction with the A171 (Stainsacre Lane) and at one receptor south of the junction. The location of these receptors is shown in Figures 10.1 and 10.2.

<sup>5</sup> Highways Agency 2003.

## 10.5 IMPACTS

Four scenarios have been considered in this study to assess existing and future ambient air quality and the changes arising from the proposed scheme. The results are summarised in Table 10.4. The detailed model outputs are presented in Appendix 10.4.

These predictions confirm that the existing air quality is good; and that the proposed increase in traffic will marginally increase air pollution at the receptors considered.

**Table 10.4 Predicted Annual Mean 2010 Existing and Proposed**

Receptor number	Name	Year	Scenario	NO <sub>2</sub>	PM <sub>10</sub>
				Annual mean ug/m <sup>3</sup>	Annual mean ug/m <sup>3</sup>
1	4 Mount Pleasant	2010	base	12.25	14.98
		2010	scheme	12.47	15.05
2	14 Mount Pleasant	2010	base	12.49	15.05
		2010	scheme	12.73	15.12
3	26 Mount Pleasant	2010	base	12.49	15.05
		2010	scheme	12.73	15.12
4	Russell Farm	2010	base	10.99	14.63
		2010	scheme	11.02	14.64

### Assessment against Criteria

Existing levels of air pollution within the study area are well within all relevant air quality objectives.

The proposed development is predicted to marginally increase air pollution from road traffic at sensitive receptors within the study area. The increased pollution is likely to be insignificant in terms of any air quality objective.

## 10.5 Mitigation

Based on this assessment, no mitigation measures are required to reduce the impacts from traffic pollution.

Basic dust suppression measures shall be adopted during the construction phase in accordance with the procedures in Appendix 10.5. The effective adoption of these procedures should ensure that there is no significant loss of amenity to local residents or adjacent industrial or commercial activities as a consequence of the proposed development.

## 10.6 Residual Effects

Based on this assessment, existing air quality within the study area is well within all relevant UK and European Air Quality Standards.

The proposed scheme is predicted to slightly increase local pollution as a consequence of the predicted increase in traffic. The predicted increase is of marginal significance in terms of UK and European Air Quality Standards.

## 11.0 NOISE AND VIBRATION

### 11.1 Introduction

Noise is commonly defined as unwanted sound. In contrast to many other environmental problems, noise pollution continues to grow and it is accompanied by an increasing number of complaints from people exposed to the noise. Significant health effects result from noise pollution including hearing impairment, interference with speech communication, disturbance to rest and sleep, mental health effects and effects on residential behaviour and annoyance. As a result of these effects, noise management forms an integral part of the planning process and a noise assessment must be conducted for any new development where noise may be generated.

The potential noise impacts from the proposed development have been assessed in relation to:

- The noise impact at the nearest noise sensitive receptors from noise generated by the operation of the site (e.g. product/food deliveries, plant and equipment operating on-site, etc.);
- The noise impact from increased road traffic in the area generated by the development on nearby residential receptors; and
- Noise impact associated with noise generated during the construction phase.

A scope for the noise assessment was based on consultation with Graham Middleton - Environmental Health Officer (EHO) of Scarborough Borough Council. The assessment is limited to treating the nearest residential units as noise sensitive and not the proposed facility itself.

### 11.2 Methodology

#### Relevant Noise Guidance Documents

##### **British Standard BS4142: 1997 – Method for rating industrial noise affecting mixed residential and industrial areas**

BS4142: 1997 describes a method of determining the level of a noise of an industrial nature, together with procedures for assessing whether the noise in question is likely to give rise to complaints from persons living in the vicinity. In general, the likelihood of complaint in response to a noise depends on factors including the margin by which it exceeds the background noise level, its absolute level, time of day, change in noise environment etc., as well as local attitudes to the premises and the nature of the neighbourhood.

The standard has been used in this assessment in order to characterise whether the noise generated from the proposed development is likely to give rise to complaints in the residential units nearest the development.

##### **Calculation of Road Traffic Noise (CRTN) – Department of Transport (Welsh Office)**

This Calculation of Road Traffic Noise (CRTN) guidance document outlines the procedures to be applied for calculating noise from road traffic. These procedures are necessary to enable entitlement under the Noise Insulation Regulations to be determined but they also provide guidance appropriate to the calculation of traffic noise for more general applications for example, environmental appraisal of road schemes, highway design and land use planning.

The document consists of three different sections, covering a general method for predicting noise levels at a distance from a highway, additional procedures for more specific situations and a measurement method for situations where the prediction method is not suitable. The prediction method constitutes the preferred calculation technique but in a small number of cases, traffic conditions may fall outside the scope of the prediction method and it will then be necessary to resort to measurement.

### **British Standard BS 5228:1997 Noise and Vibration Control on Construction and Open Sites**

This British Standard consists of five parts and covers the need for protection against noise and vibration of persons living and working in the vicinity of construction and open sites. The standard recommends procedures for noise and vibration control in respect of construction operations and aims to assist architects, contractors and site operatives, designers, developers, engineers, local authority environmental health officers and planners.

Part 1 of the standard provides a method of calculating noise from construction plant, including:

- Tables of source noise levels;
- Methods for summing up contributions from intermittently operating plant;
- A procedure for calculating noise propagation;
- A method for calculating noise screening effects; and
- A way of predicting noise from mobile plant, such as haul roads.

This part of the standard also provides guidance on legislative background, community relations, training, nuisance, project supervision and control of noise and vibration.

### **Scarborough Borough Council – Construction Noise Guidance**

The following abstracts have been taken from the Scarborough Borough Council website and define the Council's approach toward construction noise.

#### *Construction Sites - Pollution*

The Borough Council's powers to control noise pollution from construction sites that may affect local residents are contained in the Control of Pollution Act, 1974. Under Section 60 of this Act, the council may serve a notice imposing requirements as to the way in which works are to be carried out.

Such a notice may, in particular:

- specify the plant or machinery which may be used;
- specify the hours during which the works may be carried out;
- specify noise levels which must not be exceeded; and
- provide for any change of circumstances.

Any requirements made by the Council could vary according to such factors as the type and extent of the work being undertaken and the site location in relation to the surrounding residences.

#### *Advice to Builders and Developers*

Construction sites are often near existing residential accommodation. This can lead to conflict between builders/developers and local residents. However, most residents will in general accept construction site noise but will complain if work starts early or finishes late or takes place on Sundays or Bank Holidays. Generally, sites operations should be limited to 08.00am to 18.00pm weekdays.

### **World Health Organisation (WHO) – Guidelines for Community Noise (1999)**

In 1999, the World Health Organisation (WHO) proposed guidelines for community noise. In this guidance, a  $L_{Aeq}$  threshold daytime noise limit of 55 dB is suggested for outdoor living areas in order to protect the majority of people from being seriously annoyed. A second daytime limit of 50 dB is also given as a threshold limit for moderate annoyance.

The guidelines suggest that an internal  $L_{Aeq}$  not greater than 30 dB for continuous noise is needed to prevent negative effects on sleep. This is equivalent to a façade level of 45 dB  $L_{Aeq}$ , assuming open windows or a free-field level of about 42 dB  $L_{Aeq}$ . If the noise is not continuous, then the internal level required to prevent negative effects on sleep is an  $L_{Amax,fast}$  of 45 dB. Therefore, for sleep disturbance, the continuous level as well as the number of noisy events should be considered.

## Vibration

Piling operations may cause some degree of vibration at nearby noise-sensitive receptors. It is not known at this stage if there will be a requirement for any piling as part of the construction phase for the proposed development. Human beings are generally very sensitive to vibration and vibration levels barely in excess of perception levels can result in complaint. It is difficult to predict likely vibration so control measures are based on requirement for measurement in accordance with a protocol to be agreed with Scarborough Borough Council.

Sensitivity to vibration varies and peak particle velocities in the range 0.1 – 0.3 mm/s equate to the human threshold of vibration perception at frequencies of 1-80Hz. There are two types of vibration impact that need consideration:

- the effects on people or equipment within buildings; and
- the effect on buildings (or other structures) themselves.

There is no standard predictive method for calculating vibration levels due to construction works. However, British Standard (BS) 5228: Part 4: 1992 provides a case history of data on vibration levels measured during piling operations, using a range of piling techniques on a range of substrates. It is recommended that vibration monitoring should be carried out during the bored piling or demolition works at the nearest potentially effected receptor locations during the construction period.

Piling and the use of other plant and machinery can generate ground-borne vibration at properties close to construction sites. The primary cause of community concern generally relates to building damage, although concerns are often expressed at levels of vibration significantly lower than that likely to cause damage.

## Methodology for Noise Monitoring

Baseline noise monitoring was conducted at the nearest noise sensitive receptor to the proposed development in order to characterise the noise environment at this receptor. The parameters indicated below were recorded to provide a context for the noise levels predicted to arise from the proposed development. Background noise measurements were recorded in order to form the basis for a BS4142 assessment.

Monitoring was carried out at the closest noise sensitive receptor (Russell Hall Farm) for eight fifteen-minute periods during the day and for a one-hour period at night (the night-time measurements were logged every minute). Subjective noisy events were recorded during each logging period. Two further fifteen-minute measurements were taken on the boundary of the proposed site to characterise the current noise environment at the site boundary.

Noise monitoring was carried out on-site using a Solo Real Time Sound Analyser (SOLO01). This instrumentation conforms to the requirements for integrating averaging sound level meters (Type 1) as specified in BS EN 60804. The sound level meter was accurately calibrated before use.

Measurements were made at a height of 1.2m above ground level, and measurements were free-field, taken at least 3m from reflecting surfaces. The weather conditions were in accordance with the requirements of ISO 1996: Acoustics – Description and Measurement of Environmental Noise under suitable weather conditions.

The following parameters were recorded during each monitoring period:

- L<sub>Aeq</sub>** The continuous equivalent A-weighted sound pressure level. This is an "average" of the sound pressure level.
- L<sub>Amax</sub>** This is the maximum A-weighted sound level measured during the sample period.
- L<sub>Amin</sub>** This is the minimum A-weighted sound level measured during the sample period.
- L<sub>A10</sub>** This is the A-weighted sound level that is exceeded for noise for 10% of the sample period.
- L<sub>A90</sub>** This is the A-weighted sound level that is exceeded for 90% of the sample period.

### 11.3 Existing Environment

Noise monitoring was carried out at the closest noise sensitive location to the proposed development on 15 January 2007 and 16 January 2007. The position of the noise monitoring locations is illustrated in Figure 11.1. The length of time of monitoring at each location is described in Section 11.2.3. A description of the monitoring locations is given in Table 11.1 below. The conditions of the survey are presented in Appendix 11.1.

**Table 11.1 Description of Noise Monitoring Locations**

Noise Monitoring Location Number (Figure 11.1)	Address	Description
N1	Russell Hall Farm	This property, located 1km to the south of the proposed development site, is the closest noise sensitive property to the proposed development.
N2	Boundary of Proposed Development Site	This location, indicated on Figure 11.1, is situated at the boundary of the south-western corner of the proposed development site. This measurement is taken to characterise the current noise level at the boundary of the site.

The noise measurements attained during daytime and night-time monitoring surveys are displayed in Table 11.2 below.

**Table 11.2 Summary of Daytime and Night-time Noise Monitoring**

Monitoring Time Period	Measured $L_{Aeq\ 1hr}$ dB(A)	Measured $L_{Amax}$ dB(A)	Measured $L_{Amin}$ dB(A)	Measured $L_{A10}$ dB(A)	Measured $L_{A90}$ dB(A)
<b>Daytime</b>					
<b>N1</b>					
15/01/07 12:42	64.0	73.1	49.6	67.9	54.6
15/01/07 12:57	63.9	76.7	49.3	67.2	54.4
15/01/07 13:12	64.0	76.0	49.9	67.3	54.4
15/01/07 13:27	63.8	74.5	47.5	67.9	53.9
15/01/07 13:42	62.8	74.7	47.3	66.4	52.5
15/01/07 13:57	62.1	74.4	44.8	65.8	50.1
15/01/07 14:12	62.7	76.4	48.7	66.1	53.3
15/01/07 14:27	61.7	75.0	45.2	65.5	50.3
15/01/07 14:42	60.5	64.3	58.7	64.2	58.6
<b>Combined 2-hour</b>	<b>63.2</b>	<b>76.7</b>	<b>44.8</b>	<b>66.5</b>	<b>50.3</b>
<b>N2</b>					
15/01/07 14:45	56.2	66.3	45.9	59.4	49.6
15/01/07 15:00	57.8	58.9	57.1	58.8	57.2
<b>Combined half-hour</b>	<b>57.1</b>	<b>66.3</b>	<b>45.9</b>	<b>59.1</b>	<b>49.6</b>
<b>Night-time</b>					
<b>N1</b>					
16/01/07 00:56 – 01:56	49.7	73.0	27.9	28.3	41.6

A breakdown of the night time monitoring results along with a spectral representation of the one-hour of night-time measurements at location N1 is presented in Appendix 11.2.

For locations where separate fifteen-minute measurements were recorded, the  $L_{Aeq}$  was derived from the logarithmic addition of the various fifteen-minute results and the maximum and the minimum were taken as being the highest and lowest recorded values over the various measurement periods respectively. It is not possible to derive the  $L_{A10\ 1hr}$  from two separate measurements but an arithmetic average is presented for illustrative purposes. Similarly, the background noise level ( $L_{A90\ 1hr}$ ) can not

be derived from separate measurements and therefore, in this instance the lowest  $L_{A90}$  obtained has been applied to demonstrate the worst-case scenario.

Subjective observation during the measurement periods revealed that traffic noise was the dominant noise source at location N1 during the daytime period. At night, there was no perceptible noise coming from the industrial estate, however, a noise was heard that had a source in the farm barn. The maximum recorded during the night-time period was due to a passing vehicle on the A171 road. The daytime measurements at location N2 were also dominated by road traffic noise from the A171, but were also supplemented with fan noise coming from one of the industrial units adjacent to the proposed development site.

## 11.4 Impact Assessment

### Construction Phase

#### Construction Noise - General

Typical noise levels from various construction plant and activities are displayed in Table 11.3 and typical combined construction noise levels are illustrated in Table 11.4. The plant shown in Table 11.3 is generally representative of the type of plant that will be in use for the construction phase of the proposed development.

**Table 11.3 Noise Levels for Construction Plant and Activities (Ref: BS 5228)**

Activity / Plant	Maximum $L_{Aeq}$ @ 10 m
Site preparation - Dozer	92
Pile Driving – Bored Piling	85
Trenching – Tracked Excavator	84
Concrete Operations - Concrete Mixer	72
Trench Filling - 2 T Dumper	74
Haulage lorries	70
Pumping/dewatering	81
Compacting fill (vibrating roller)	78

**Table 11.4 Typical Combined Construction Noise Levels (all values in dB -  $L_{Aeq}$ )**

Activity	$L_{Aeq}$ @ 10 m	$L_{Aeq}$ @ 50 m	$L_{Aeq}$ @ 100 m	$L_{Aeq}$ @ 200 m	$L_{Aeq}$ @ 300 m
Site clearance and preparation of workings	87	73	67	61	58
Topsoil stripping	89	75	69	63	60
Excavation and preparation	85	75	65	59	57
HGV movements (up to 3 units together)	75	61	55	49	46
Pile Driving – Bored Piling	85	71	65	59	56

NB: No correction for absorbent ground is applied to this data

As no detailed project programme for construction has been prepared for the proposed development to date, the above tables serve as typical examples of the noise levels likely to be experienced for various parts of the construction process.

#### Likely Impact of Construction Noise from Proposed Development

Construction activity for the proposed development will operate between the hours of 08:00 and 18:00, thus falling inside the normal daytime operating hours stipulated for such activities.

It is expected that the plant used for the enabling works and substructures stage of the construction process will include:

- Tracked excavators;
- Dumper trucks;
- Lorries for spoil removal;
- Lorries for stone deliveries and other materials;
- Piling rig for driven concrete piles (possible);
- Concrete deliveries; and
- Either: Vibro Compaction Rig for stone columns (possible);
- Or Dynamic Compaction Rig which drops repeatedly a large weight onto the ground (possible).

Additional noise sources will emerge as the construction phase proceeds from sources such as:

- The use of large mobile or tracked cranes for steel erection;
- The delivery of steel, floor beams and cladding/roofing;
- The use of platform scissors for cladding erection;
- The use of mobile crane for lifting plant to the roof;
- General deliveries for construction materials; and
- The collection and delivery of skips for waste removal.

In order to characterise the likely noise impact from the construction phase of the proposed development on the closest noise sensitive receptor, noise predictions were carried out to determine the likely worst-case construction noise level at the Russell Hall Farm. Noise levels illustrated in Table 11.3 and Table 11.4 were used to calculate the likely noise level at the Russell Hall Farm. For the construction activities on the proposed development site, the worst-case noise level of 92dB(A) from Table 11.4 has been chosen as the reference noise level at 10m.

Taking the distance between the southern boundary of the proposed development site and the boundary of the Russell Hall Farm as exactly 1km, the predicted noise level at the boundary of the Russell Hall Farm from construction noise at the proposed site will be 44dB(A). Table 11.2 illustrates that the daytime background noise level ( $L_{A90}$ ) at the Russell Hall Farm is greater than 50dB(A). This prediction demonstrates that there will be no significant impact from construction noise activities at the proposed development site on the closest noise sensitive receptor (i.e. Russell Hall Farm).

### **Operational Phase**

The potential noise impact resulting from the operational phase of the proposed development will be assessed in two ways:

- The impact of operational noise from the proposed site on the nearest noise sensitive receptor; and
- The impact of increased traffic as a result of the proposed development on the nearest noise sensitive receptor.

### **Impact of Operational Noise from the Facility on Nearest Noise Sensitive Property**

The most suitable way to assess the likely impact of operational noise from the proposed facility on the nearest noise sensitive properties is to carry out a BS4142 assessment. As outlined in Section 11.2, BS4142: 1997 describes a method of determining the level of a noise of an industrial nature, together with procedures for assessing whether the noise in question is likely to give rise to complaints from persons living in the vicinity.

In order to carry out a BS4142 assessment, it is first necessary to characterise the operational noise that is likely to be emanating from the proposed development. It is not known at this stage who will occupy the units and therefore, it is impossible to state with certainty the noise levels that are likely to be produced from activities within the units. The planning policy currently indicates that the site is suitable for B1 (Business) and B2 (General Industrial) but not B8 (Storage and Distribution). Based



on this information, probable worst-case scenarios have been invented to conduct BS4142 assessments on.

The probable principal sources of noise likely to be produced by the proposed development site are:

#### *Car Parking On-site*

The proposed development is likely to have in the region of 50-200 car parking spaces. Previous measurements taken by RPS Consulting Engineers have found that noise levels at a 10m distance from the boundary of a car park containing 1,000 car parking spaces during busy usage periods are in the region of 50 dB(A)  $L_{Aeq-1hr}$ . Any car parking facilities on the proposed development site would be considerably smaller in size and would not be expected to produce a noise level as high as this. Nevertheless, this noise will be applied to the BS4142 assessment as a worst-case scenario.

#### *Service Yard Activity/Deliveries*

As nothing is currently known on the likely occupiers of the industrial units, it will be assumed that there may be early morning deliveries (i.e. night-time) to the proposed development site. Delivery vehicles will be of variable specification and therefore, will emit variable noise levels. Previous measurements taken by RPS Consulting Engineers for delivery activities gave a  $L_{Aeq, 1hr}$  level in the region of 75dB(A) at source for very active delivery periods. This noise level accounts for noise produced by the delivery vehicle on approach to and exiting the loading bay area. We will assume a worst-case scenario of 70 dB(A)  $L_{Aeq, 1hr}$  at a distance of 10m for the purposes of the BS4142 assessment. This is very much a worst-case scenario for this development and in reality, this noise level is likely to be significantly higher than what will be experienced at the proposed site.

#### *Plant & Equipment*

No specific information is available at this stage in relation to the noise emitting plant and equipment to be employed in each of the industrial units on the development site. For the purposes of the BS4142 assessment, a worst-case emission  $L_{Aeq, 1hr}$  of approximately 60dB(A) at a distance of 10m has been applied (although this is likely to be higher than the noise emissions in reality).

### DAYTIME BS4142 ASSESSMENT

Based on the noise sources indicated above, a worst-case  $L_{Aeq, 1hr}$  for the daytime period was derived in each case for the purposes of carrying out a BS4142 assessment. The assessment for equipment/machinery noise associated with the facility and service yard noise is considered below.

#### **Assessment of Equipment/Machinery Noise Associated with the Facility**

The assessment for equipment/machinery noise associated with the facility has been conducted using the noise level at 10m along with distance attenuation to derive the specific noise at the nearest receptor (i.e. Russell Hall Farm). The background noise level ( $L_{A90}$ ) attained during daytime monitoring (See Table 11.2) has been used in this assessment.

The specific noise has been calculated assuming a worst-case scenario of noise emitting plant and equipment operating at the edge of the proposed building facing the nearest noise sensitive receptor, thus giving an  $L_{Aeq, 1hr}$  of 60dB at a distance of 10m from the edge of the wall. Distance attenuation has been calculated in each case using the equations outlined in BS5228. It is assumed that the units will emit an acoustic feature to account for the worst-case scenario.

	<b>N1</b>
Residual Noise Level $L_{Aeq, 2hr}$ (dBA)	63.2
Background Noise Level $L_{A90, 2hr}$ (dBA)	50.3
Specific (Worst-case) Noise Level at property $L_{Aeq, 1hr}$ (dBA)	12.0
Acoustic Feature (dBA)	+ 5.0
Rating Level (dBA)	17.0
Background Noise Level $L_{A90, 2hr}$ (dBA)	50.3
Excess of Rating Over Background Level (dBA)	- 33.3

The above assessment indicates that complaints are unlikely from plant and equipment noise.

### Assessment of Service Yard / Delivery Noise

Using a worst-case scenario of 70 dB(A)  $L_{Aeq\ 1hr}$  at a distance of 10m as indicated above, the BS4142 assessment was calculated as follows. Again, the acoustic feature has been assumed to give a worst-case assessment.

	<b>N1</b>
Residual Noise Level $L_{Aeq\ 2hr}$ (dBA)	63.2
Background Noise Level $L_{A90\ 2hr}$ (dBA)	50.3
Specific (Worst-case) Noise Level at property $L_{Aeq\ 1hr}$ (dBA)	22.0
Acoustic Feature (dBA)	+ 5.0
Rating Level (dBA)	27.0
Background Noise Level $L_{A90\ 2hr}$ (dBA)	50.3
Excess of Rating Over Background Level (dBA)	- 23.3

The above assessment indicates that complaints are unlikely from service yard/deliveries noise.

### Assessment of Car Parking Noise

Using a worst-case scenario of 50 dB(A)  $L_{Aeq\ 1hr}$  at a distance of 10m as indicated above, the BS4142 assessment was calculated as indicated below. The distance attenuation has been calculated to be the nearest distance between the noise sensitive property and the closest car parking area. A tonal quality has been ascribed to the noise from the car park to ensure a worst-case scenario is examined.

	<b>N1</b>
Residual Noise Level $L_{Aeq\ 2hr}$ (dBA)	63.2
Background Noise Level $L_{A90\ 2hr}$ (dBA)	50.3
Specific (Worst-case) Noise Level at property $L_{Aeq\ 1hr}$ (dBA)	2.0
Acoustic Feature (dBA)	+ 5.0
Rating Level (dBA)	7.0
Background Noise Level $L_{A90\ 2hr}$ (dBA)	50.3
Excess of Rating Over Background Level (dBA)	- 43.3

The above assessment indicates that complaints are unlikely from car parking noise on-site.

## NIGHT TIME BS4142 ASSESSMENT

### Assessment of Equipment/Machinery Noise Associated with the Facility

The assessment for equipment/machinery noise associated with the facility during the night has been conducted using the same noise level at 10m as was used for the daytime assessment.

	<b>N1</b>
Residual Noise Level $L_{Aeq\ 1hr}$ (dBA)	49.7
Background Noise Level $L_{A90\ 1hr}$ (dBA)	41.6
Specific (Worst-case) Noise Level at property $L_{Aeq\ 1hr}$ (dBA)	12.0
Acoustic Feature (dBA)	+ 5.0
Rating Level (dBA)	17.0
Background Noise Level $L_{A90\ 1hr}$ (dBA)	41.6
Excess of Rating Over Background Level (dBA)	- 24.6

The above assessment indicates that complaints are unlikely from plant and equipment noise.

### Assessment of Service Yard / Delivery Noise

This assessment was conducted using the same worst-case noise level derived for the daytime assessment.

	<b>N1</b>
Residual Noise Level $L_{Aeq\ 2hr}$ (dBA)	49.7
Background Noise Level $L_{A90\ 1hr}$ (dBA)	41.6
Specific (Worst-case) Noise Level at property $L_{Aeq\ 1hr}$ (dBA)	22.0
Acoustic Feature (dBA)	+ 5.0
Rating Level (dBA)	27.0
Background Noise Level $L_{A90\ 1hr}$ (dBA)	41.6
Excess of Rating Over Background Level (dBA)	- 14.6

The above assessment indicates that complaints are unlikely from service yard/deliveries noise.

### Calculation of Road Traffic Noise (CRTN) Assessment

In order to assess the impact on noise sensitive receptors from increased traffic on the existing road network in the vicinity of the proposed development, an assessment was carried out using the methodologies outlined in the Department of Transport (Welsh Office) document *Calculation of Road Traffic Noise (CRTN)*. The methodology was used to predict the noise level from road traffic at the nearest noise sensitive receptor (i.e. Russell Hall Farm) in the Existing Scenario (2006) and the worst-case Do Something Scenario (2023). This example is used to demonstrate a worst-case effect of the additional traffic on the roads in the vicinity of the proposed development.

Table 11.5 indicates the noise levels at the nearest noise sensitive receptor in the Existing 2006 Scenario and the Do Something 2023 Scenario. In calculating the levels below, the HGV content used for the A171 is 8% and the traffic speed is 108kph.

**Table 11.5 Noise Impact Associated with Additional Traffic**

	Existing 2006	Do Something 2023
A171 18hr AADT	5,740	7,331
<b>Basic Noise Level <math>L_{A10\ 18hr}</math></b>		
@ 10m from A171	66.7 dB	67.8 dB
<b>Correction for Mean Traffic Speed (V) and %HGV (p)</b>		
@ 10m from A171	71.4 dB	72.5 dB
<b>Noise Level at Receptor (<math>L_{A10\ 18hr}</math>) Corrected for Distance</b>		
	67.4 dB	68.5 dB

Based on the CRTN calculations, the noise increase at the nearest noise receptor as a result of the proposed development will be 1.1 dB(A). It is accepted that it takes a 3 dB(A) alteration in noise levels for that change to become subjectively perceptible (Planning Policy Guidance [PPG] Note 24). Table 11.5 demonstrates that the increase in noise levels on the roads in the vicinity of the proposed development as a result of the development will be imperceptible over the period of time assessed.

## 11.5 Mitigation

### Construction Noise Mitigation Measures

There is no detailed plan as yet with regard to the construction phase of the proposed development. It has been proposed at the outset that the hours of operation for construction works will be between 08:00 and 18:00 from Monday to Friday and 08:00 and 13:00 on Saturday. A detailed programme for the construction phase will be prepared as part of the detailed design phase and will include information such as notifications, contact numbers, method of appointing contractor, monitoring, contractual conditions and timescales. The programme of works will be agreed with Scarborough

Borough Council (EHO)/North York Moors National Park Authority and the successful contractor will be obliged to comply with the information therein.

### **Piling**

Piling may be required during construction. The method used will depend on ground conditions, which have not been determined as yet. The standard to be achieved during piling operations and the selection criteria for contractors will be agreed with Scarborough Borough Council (EHO) / North York Moors National Park Authority prior to works commencing. This operation should be carried out using recognised noise reducing systems, and only during specified working hours and its activity will be confined to specific locations and will be of limited duration. Measures shall be taken to minimise vibration due to plant and machinery on the site.

### **Vibration**

Subject to vibration at sensitive locations not exceeding 5mm/s during general construction works and 10mm/s during piling/blasting, structural damage to buildings is highly unlikely.

### **Monitoring**

It may be necessary to conduct noise monitoring of construction works during noisy or extensive works at locations close to the nearest residential properties. Noise levels limits set down by Scarborough Borough Council (EHO)/North York Moors National Park Authority should be adhered to. With regard to vibration, it may be beneficial to monitor vibration levels at the beginning of blasting or pile driving process to ensure that levels at the most proximate properties do not cause damage.

### **Operational Phase Noise Mitigation**

The planning and final design stage of any development can greatly improve the internal noise climate within a building and the noise impact a development is likely to have on surrounding noise sensitive receptors. In light of the location of the site, the distance from noise sensitive receptors and the layout of the surrounding road network, the above assessment indicates that the operation of the proposed development is not likely to have a significant impact on noise sensitive receptors in the study area.

The assessment on traffic noise demonstrates that the noise increase from additional traffic in the vicinity of the proposed development as a result of the development will not be significant.

Mitigation is not required in relation to the car parking on-site. While building services noise is not likely to generate a significant noise problem, it may be possible to reduce this impact through sensitive positioning of equipment/machinery. In individual circumstances, the application of silencers, attenuators, acoustic louvres, anti-vibration mounts and screenings may be deemed appropriate. This assessment is not based on a detailed plan of services at the proposed facility.

## **11.6 Residual Impact**

During the construction phase of the development, noise levels will be temporarily increased in the near vicinity of the site. However, there will be no increase in noise levels at the nearest noise sensitive receptor (Russell Hall Farm) as a result of construction noise from the proposed development.

During the operational phase of the proposed development, noise levels from car parking, plant/equipment and deliveries/service yard noise will be within criterion levels for the recommended guidance documents at the nearest noise sensitive receptor. The noise impact of the development is not deemed to be significant.

The impact of additional traffic in the vicinity of the proposed development as a result of the development will not be significant on nearby noise sensitive receptors. The traffic assessment was conducted based on a worst case scenario comparing the Existing 2006 Scenario with the Do Something Scenario 2023.

## 11.7 References

British Standards Institution, British Standard 4142:1997: *Rating of industrial noise affecting mixed residential and industrial areas.*

British Standards Institution, British Standard 5228:1997: *Noise and vibration control on construction and open sites.*

Department of Transport (Welsh Office) *Calculation of Road Traffic Noise (CRTN).*

ISO 1996: Acoustics – Description and Measurement of Environmental Noise under suitable weather conditions.

Office of the Deputy Prime Minister, *Planning Policy Guidance (PPG) Note 24*

World Health Organisation, *Guidelines for Community Noise*, 1999.

## 12.0 CULTURAL HERITAGE

### 12.1 Introduction

This section seeks to identify and assess impacts on known and potential cultural heritage constraints on or adjacent to the proposed development site at Whitby, North Yorkshire. The primary objective is to define and comment on the likely impact of works resulting from the proposed industrial scheme on the cultural heritage resource and to outline mitigation measures for any likely impacts. The site is located at the eastern end of Enterprise Way Business Park, at Whitby Industrial Estate and currently consists of a rectilinear pasture field.

This section has been prepared in accordance with *Planning Policy Guidance Note 16: Archaeology & Planning* issued by the Department of the Environment in 1990 and *Planning Policy Guidance Note 15: Planning and the Historic Environment* issued in 1994. Due cognisance has been taken of the *Design Manual for Roads and Bridges (DMRB) Volume 11 Section 3 Part 2 Cultural Heritage* (1994).

### 12.2 Methodology

A desktop survey of archaeological and cultural heritage sites within the area of the proposed development site was carried out in order to assess heritage constraints. In summary, the methodological approach has involved:

- Identification and evaluation of archaeological sites, listed buildings and artefact finds on or adjacent to the proposed site;
- Identification of conservation areas and areas of townscape character;
- Identification of Historic parks, Gardens and Demesnes;
- Review of the Buildings at Risk Register; and
- Assessment of the proposed works and likely impacts.

Consultation with the Heritage Section of the Planning and Countryside Unit of North Yorkshire County Council and the North York Moors National Park Authority was undertaken in order to identify cultural heritage constraints pertaining to the study area. The principle sources reviewed and information supplied include:

- Historic Environment Records (Sites and Monuments) information;
- Sites and Monuments mapping;
- The Register of Historic Battlefields;
- Aerial Photographs;
- Archaeological Fieldwork reports and archives (where available);
- OS 'antiquity' map entries;
- Information supplied by the National Monuments Record (where available);
- Listed building descriptions; and
- Conservation Area Appraisals.

A walkover survey of the proposed industrial development site was undertaken in December 2006. All areas were accessible and the field was systematically walked and assessed in terms of landscape, land use, vegetation cover, presence or lack of archaeological sites and potential for undetected archaeological sites/features.

### Legal and Policy Framework for the Protection of Cultural Heritage

#### *Protection of Cultural Heritage*

The management and protection of cultural heritage in the United Kingdom is achieved through a framework of international conventions and national laws and policies. This is undertaken in accordance with the provisions of the *European Convention on the Protection of the Archaeological Heritage* (Valletta Convention) which was ratified by the UK government in September 2000 and the *European Convention on the Protection of Architectural Heritage* (Grenada Convention). Cultural heritage can be divided loosely into the archaeological resource covering sites and monuments from

the prehistoric period until the post-medieval period and the built heritage resource, encompassing standing structures and sites of cultural importance dating from the post-medieval and modern period.

#### *The Archaeological Resource*

The Ancient Monuments and Archaeological Areas Act 1979 is in place to make provision for the investigation, preservation and recording of matters of archaeological or historical interest and the regulation of operations or activities affecting these matters. There are a number of mechanisms under the Ancient Monuments and Archaeological Areas Act that are applied to secure the protection of archaeological monuments. These include the Historic Buildings and Ancient Monuments Act 1953, The Buildings at Risk Register, The Schedule of Monuments, The Register of Parks and Gardens and the Register of Historic Battlefields.

The *Planning Policy Guidance Note 16: Archaeology and Planning* (1990) is a guide for planning authorities in England, property owners, developers, archaeologists, amenity societies and the general public. It sets out the Secretary of State's policy on archaeological remains on land, and how they should be preserved or recorded both in an urban setting and in the countryside. It gives advice on the handling of archaeological remains and discoveries under the development plan and control systems, including the weight to be given to them in planning decisions and the use of planning conditions. Similarly, *Planning Policy Guidance Note 15: Planning and the Historic Environment* (1994) lays out government policies for the identification and protection of historic buildings, conservation areas and other elements of the historic environment. The guidance pulls together and expands existing advice, within the existing legislative framework.

The Historic Buildings and Monuments Commission for England, English Heritage, is the Government's statutory advisor on the historic environment whose powers are set out in the National Heritage Act 1983.

#### *Ownership and Guardianship of National Monuments*

Under the Ancient Monuments and Archaeological Areas Act 1979 national monuments may be acquired by the Secretary of the State for the purpose of securing its preservation. This may be done as a compulsory acquisition or by agreement. The Secretary of State and any local authority shall be under a duty to maintain, manage and have full control over any monument which is under their guardianship by virtue of this act. Under Section 24 of the Act grants are given by English Heritage principally for the cost of the repair, archaeological recording and consolidation of monuments. More rarely, they may be given to a suitable body for purchase of monuments which are at risk of damage or destruction. A small proportion of archaeological sites - those of national importance - are legally protected by being placed on the Schedule of Monuments by the Secretary of State for National Heritage. English Heritage is the government's adviser for all matters concerning scheduled monuments.

#### *The Schedule of Ancient Monuments of National Importance*

Under the Ancient Monuments and Archaeological Areas Act 1979 the Secretary of State for National Heritage has a duty to compile and maintain a schedule of monuments. Any monuments on the schedule have statutory protection. Inclusion of new monuments on the schedule is at the Secretary of State's discretion, although monuments added to it must be of national importance. A schedule has been kept since 1882 of monuments whose preservation is given priority over other land uses. The current legislation, the Ancient Monuments and Archaeological Areas Act 1979, supports a formal system of *Scheduled Monument Consent* for any work to a designated monument. Scheduling is the only legal protection specifically for archaeological sites. The schedule currently has c. 18,300 entries (approx. 31,400 sites).

Note: Archaeological sites which are not scheduled monuments are protected by the planning process.

#### *Scheduled Monument Consent*

A monument which has been scheduled is protected against disturbance or unlicensed metal detecting. The Secretary of State must be informed about any work which might affect a monument

above or below ground, and English Heritage advises the Government on each application. Written consent must always be obtained before any work can begin.

### *Sites and Monuments Records*

Sites that are not scheduled must be preserved in different ways or, if that is not feasible, recorded before they are destroyed. Good documentation is a vital part of protecting sites in this way. In recent years, English Heritage has funded the provision of staffed records of archaeological sites within each local authority. These records are known as Sites and Monuments Records (SMRs). Archaeological records for England currently contain information about approx. 1 million sites and monuments.

### *The Architectural Heritage Resource*

The Planning (Listed Buildings and Conservation Areas) Act (1990) states that in view to the guidance of local planning authorities in relation to buildings of special architectural or historic interest, the Secretary of State shall compile lists of such buildings or approve with or without modifications, such lists compiled by the Historic Buildings and Monuments Commission for England. Section 1 of this Act comprises a comprehensive list of such buildings. The details of listed buildings become part of a public record and most significantly, the building is immediately protected by law, and any changes to it must first receive listed building consent.

Listing ensures that the architectural and historic interest of a building is carefully considered before any alterations, either outside or inside, are agreed. The main criteria used for selection are:

- *architectural interest*: all buildings which are nationally important for the interest of their architectural design, decoration and craftsmanship; also important examples of particular building types and techniques, and significant plan forms;
- *historic interest*: this includes buildings which illustrate important aspects of the nation's social, economic, cultural or military history;
- *close historical association* with nationally important buildings or events; and
- *group value*, especially where buildings comprise an important architectural or historic unity or are a fine example of planning (such as squares, terraces and model villages).

All buildings built before 1700 which survive in anything like their original condition are listed, as are most built between 1700 and 1840. After that date, the criteria become tighter with time, because of the increased number of buildings erected and the much larger numbers which have survived, so that post-1945 buildings have to be exceptionally important to be listed. Buildings less than 30 years old are only rarely listed, if they are of outstanding quality and under threat.

Listed buildings are graded to show their relative importance:

- Grade I buildings are those of exceptional interest;
- Grade II\* are particularly important buildings of more than special interest; and
- Grade II are of special interest, warranting every effort to preserve them.

There are approximately 370,000 building entries currently protected by listing, and the majority - over 92% - are Grade II. Although local authorities may refuse any listed building consent applications, they may not grant consent for any works to a Grade I or II\* building, or substantial demolition of a Grade II building, without first referring the case to the Secretary of State.

### *Buildings at Risk*

The 'Buildings at Risk Register', published annually, brings together information on all Grade I and II\* listed buildings, and Scheduled Ancient Monuments (structures rather than earthworks), known to be 'at risk' through neglect and decay, or vulnerable to becoming so.

The Register is intended to keep attention focused on neglected historic buildings and monuments. It is a working tool that enables definition of the scale of the problem and establishes the extent to which these important buildings are at risk. This information helps to establish the resources necessary to bring these buildings back into good repair and, where appropriate, beneficial use, and to prioritise



action by English Heritage, local authorities, building preservation trusts, funding bodies, and everyone who can play a part in securing the future of these buildings.

#### *Register of Historic Parks and Gardens*

Although inclusion of an historic park or garden on the *Register* in itself brings no additional statutory control, local authorities are required by central government to make provision for the protection of the historic environment in their policies and their allocation of resources. Registration is a material consideration in planning terms (*Planning Policy Guidance Note 15, 2.24, September 1994*) so, following an application for development which would affect a registered park or garden, local planning authorities must, when determining whether or not to grant permission, take into account the historic interest of the site. Local authorities are also specifically guided towards protecting registered parks and gardens when preparing development plans (*Planning Policy Guidance Note 15, 1.6; 2.1*).

#### *The Register of Historic Battlefields*

The Register of Historic Battlefields identifies forty-three important English battlefields. Its purpose is to offer them protection and to promote a better understanding of their significance. Each Register entry is based on the available evidence and includes a map of the battlefield area showing the position of the armies and features which were part of the original battleground. These maps are intended to be the starting point for battlefield conservation and interpretation by identifying the most visually sensitive areas.

### **12.3 Existing Baseline Conditions**

The proposed development site is located adjacent to land currently used for industrial use at the eastern side of the existing Enterprise Way Business Park in Whitby, North Yorkshire (National Grid Ref. NZ 9110 0920). The site consists of a rectilinear field, currently under pasture.

In reviewing archaeological sites within the study area, it is important to note the passage of time has ensured that only fragmentary remains for human settlement, economy and ritual practice survives. It should be noted that whilst most archaeological sites survive visibly above ground level, it is possible that more archaeological sites still remain undetected just below ground level. Although an archaeological site has been levelled, evidence for the site itself and for many of the activities that took place there can remain undisturbed beneath the ground surface and can only be interpreted correctly by removing it through careful archaeological excavation.

#### *Archaeological and historical data*

The following tables outline results from desk-based assessment as well as a culmination of data provided by the Heritage Section of the Planning and Countryside Unit of North Yorkshire County Council and the North York Moors National Parks Authority pertaining to the proposed development site and wider study area. It should be noted that no recorded archaeological sites or listed buildings are located on the proposed site.

**Table 12.1 Archaeological Sites within the wider Study Area**

Figure 12.2 Ref. No.	National Inventory No.	Type	Location	Period	Description
1	531507	Longhouse	Hawsker Cum Stainsacre OSGB NZ 927 096	Modern 1700 - 1799; Post-Medieval 1987	Longhouse built in 18 <sup>th</sup> century, now in use as a dwelling.
2	531506	Farmhouse	Hawsker Cum Stainsacre OSGB NZ 926 096	Post Medieval 1800 – 1899	Farmhouse built in 19 <sup>th</sup> century.
3	531500	Longhouse	Hawsker Cum Stainsacre OSGB NZ 919 103	Post medieval 1700 – 1799; 1800 – 1899	Probably a 19 <sup>th</sup> century house rebuilt from a former longhouse.
4	918848	Medieval Town	Whitby, Scarborough OSGB NZ 8969 1087	Medieval, 1128	Medieval borough, mentioned in documents dated 1128; 1177 – 1189 and 1201.
5	SMR No. MNY23678  (ENHMR – 1309358)	Iron Age Settlement	Whitby OSGB NZ 90 09	Iron Age	Excavation of a site identified during topsoil-stripping revealed part of an Iron Age enclosure, incl. a granary; round house & trough.
6	29841	Hospital of St. Michael - Leper Hospital	Whitby OSGB NZ 901 103	Medieval 1109; 1539	Leper hospital founded in 1109 at a site granted by William de Percy, Abbot of Whitby to a leper called Orm. A monk was later appointed master and the hospital had a chaplain, brothers and sisters. The hospital was dependent on the managed by the abbey and was probably in use until the suppression in 1539. Its site is still identified by the name Spittal Bridge.
7	29840	Hospital of St John the Baptist – Chapel & Hospital	Whitby OSGB NZ 9008 1038	Medieval 1320, 1407 - 1408	Hospital and chapel first documented to the north of Whitehall in 1320, when there was a warden, brethren and sisters. It was still in use in 1401, but not by 1407 -08.
8	29693	Scarborough & Whitby Railway – earthwork, railway	Whitby OSGB NZ 895 099	Modern 1885, Post Medieval 1965	The course of the former Scarborough & Whitby Railway, opened in 1885, purchased by the North Eastern Railway in 1898 and closed to passengers in 1965.
9	29556	Earthwork; fishpond; garden; manor; moat; ridge and furrow	Hawsker Cum Stainsacre OSGB NZ 9204 0958	Medieval 1066 - 1540	The remains of a medieval moated site, enclosing a modern farm. The manor was documented in 1394 and was held by Whitby Abbey until the dissolution. Scheduled site.
10	29830	Whitby Abbey	Whitby OSGB NZ 9030 1122	Early Medieval 1077 – 1109; Medieval 1109 – 1539; 1220; 1300 - 1399	Originally founded as a double house priory in 657 and destroyed by Danes c. 867. refounded as a Benedictine Priory by 1077, but lapsed. It was refounded as a Benedictine Abbey by 1109. Dissolved in 1539. The church was left intact at the Dissolution and was almost

Figure 12.2 Ref. No.	National Inventory No.	Type	Location	Period	Description
					complete as late as 1711 but now in ruins. The earliest part of the church dates from 1220, there are also 14 <sup>th</sup> century additions. Scheduled, listed and in guardianship.

**Table 12.2 Excavations within the wider Study Area**

National Inventory No.	Type	Location	Period	Description
ENHMR – 1309358 (SMR No. MNY23678)	Iron Age Settlement	Whitby OSGB NZ 90 09	Iron Age/Romano-British	Excavation of a site identified during topsoil-stripping revealed part of an Iron Age/Romano-British enclosure, incl. a granary; round house & trough.
ENHMR - 1351145	Abbey, Hospital & Workhouse	Whitby OSGB NZ 90 10	Early Medieval/Medieval/Post Medieval	Assessment carried out in advance of development; Early Medieval Abbey; Medieval Hospital & Post Medieval Workhouse.
EHNMR - 1351138	Corn mill; earthwork, enclosure, iron foundry; railway cutting; Roman site & viaduct	Whitby OSGB NZ 89 10; OSGB NZ 89 09	Uncertain/Roman /post Medieval	Assessments carried out along the proposed alternative courses of the rising main. Post Medieval corn mill; uncertain? enclosure; uncertain? Earthwork; Post Medieval iron foundry; Post Medieval railway cutting; Roman site & Post Medieval viaduct.
EHNMR - 1321334	Stable; hearth	Whitby OSGB NZ 90 10	Post Medieval	Monitoring of residential groundworks recorded only the remains of former stables on the site. Post Medieval stable & hearth.
EHNMR - 132133	Building	49-50 Baxtergate, Whitby OSGB NZ 89 10	Medieval	Monitoring of groundworks recorded the survival of medieval levels in this part of Baxtergate. Medieval building.
EHNMR - 1330836	Medieval & Post Medieval site	Whitby UWWTD scheme OSGB NZ 90 08	Medieval; Post Medieval	Stage 1 monitoring of geotechnical boreholes around Whitby recorded significant depths of stratified medieval deposits.

**Table 12.3 Artefacts from the wider Study Area**

National Inventory No.	Find Type	Period	Details
29450	Double-bladed copper axehead	Middle Bronze Age	Thought to be of Mediterranean origin. Context unknown. In Skipton Museum.
29451	Flint assemblage (arrowheads, axeheads etc.)	Neolithic/Bronze Age	Found near Whitby. In Leeds & Whitby museums.
29452	Pygmy cup	Bronze Age	Obtained from a howe near Whitby. In British Museum.
29453	Sword blade fragment	Bronze Age	Found near Whitby. In Whitby museum.
29454	Several quernstones	Iron Age/Roman/Medieval	Found in Whitby; include a possible Iron Age/Romano-British beehive quern and a medieval Mayen lava quern. In Pannett Park Museum, Whitby.
29455	Palstave	Bronze Age	Found in Whitby. In St. Alban Museum.
29456	Coin	Iron Age	Iron Age coin of Carthage found in Whitby. In Whitby museum.

National Inventory No.	Find Type	Period	Details
29457	Coin	Roman	Roman coin of Constantine II found in 1928 during the rebuilding of the 'Jolly Sailor' public house on St. Ann's Staith. In Whitby museum.
29458	Coin	Roman	Roman coin of Vespasian found near Mayfield in 1877. In Whitby museum.
29460	Coin	Roman	Roman coin of Antoninus Pius, struck Alexandria in 149AD, was found during construction of a new Higher Grade School on West Cliff, Whitby in 1935. In Whitby museum.
29462	Coin	Roman	Roman coin recorded in 1955.
29466	Quern	Roman	Roman quern of volcanic tufa found in Stockton Walk on the site of a demolished property. In Whitby museum.
29467	Cross base	Medieval (1066-1540)	Medieval cross base at junction of Stakesby Road and Westbourne Road. Remains of a mile cross marking the approach to Whitby Abbey.
29480	Coin	Roman	Roman coin of Claudius II was found in the cliff above the beach at Uppang in 1940. In Whitby museum.
29481	Coin	Roman	Roman coin of Trajan found near Mayfield. In Whitby museum.
29489	Coin	Roman	Roman coin of Augustus found below the Royal Hotel at West Cliff in 1940.
29493	Gold stater	Iron Age	Iron Age gold stater found in Whitby.
29195	Stone axe	Neolithic	Perforated stone axe found in the vicarage garden at Ruswarp.
29203	Coin	Roman	Roman coin found at Larpool possibly in a salvage tip, in 1943.
29209	Spindle whorl	Roman/ Early Medieval	Found in garden of 96 Ruswarp Lane. In Bradford Museum.
29820	Coin	Roman	Roman coin of Domitian found in Whitby Harbour in 1931. In Whitby museum.
29821	Pottery	Medieval	Medieval pottery recovered from a cliff face in 1955.
29824	Midden	Saxon	Saxon midden recorded at the foot of East Cliff in Whitby. Comprised of wide range of finds thought to be associated with Whitby Abbey. Other finds of bone comb, jet beads found in Black horse yard. In Whitby museum.
29826	Inscription	Medieval	Part of a medieval inscription by John of Brampton found in a wall. Originally from Whitby Abbey. Within scheduled & guardianship of area of the abbey.

**Table 12.4 Listed Buildings within the wider Study Area**

Figure 12.3 Ref. No.	LBSUID	Grid Reference	Type	Parish/District	Name	Description	Status	Source
1	32760	NZ 91736/09517	Listed Building	Hawsker Cum Stainsacre/Scarborough	Robin Hood and Little John Stones	Two field boundary stones. Probably 19 <sup>th</sup> Century replacing earlier stones. Roughly tooled gritstone. Stones approx. 0.6m high consisting of cylindrical columns with circular flat caps. Cap rims inscribed: <i>Robin Hood Close</i> and <i>Little John Close</i> respectively. The field names thus designated are said to derive from a legendary archery contest between Robin Hood and Little John. However it is also thought that the name Robin Hood is a corruption of the hobgoblin, Robin Goodfellow. Included for historical interest.	Active	White, S. (1987) <i>Standing Stones and Earthworks on the North Moors</i> . P45
2	436838	NZ 90340/09648	Listed Building	Whitby/Scarborough	Mount Farmhouse	Dated 1783 over the door. Two storeys, rendered. Replaced pantile roof. 2 chimneys at gable ends. 2 fixed windows with one opening light and glazing bars flank a small window. 2 modern windows on ground floor, 2-light sashes, no glazing bars. Modern door and porch.	Active	
3	437212	NZ 90634/09785	Listed Building	Whitby/Scarborough	Lodge Farmhouse	Dates to the first half of the 18 <sup>th</sup> century. Square building of two storeys and attics in ashlar. Hipped slate roof with on dormer. Stone eaves cornice. One sash window to front, no glazing bars. Stone mullion window to left with casement with glazing bars below. Left has two-storey wing with pantile roof. One modern two-light window on flint floor. Three-light sash with glazing bars on ground floor. House has plain door with sloped hood on brackets.	Active	
4	437563	NZ 90734/08816	Listed Building	Whitby/Scarborough	Broomfield	Circa 1800. Three storeys in ashlar, the top storey being a dummy with painted trompe l'oeil windows. Two stone chimneys at gable ends. Slate roof with capped gables with kneelers. Two windows with moulded flush frames, double-hung sashes with glazing bars. Central long-rounded headed staircase window with keystone and blocks. Gothic glazing. Modern door in round-headed blocked	Active	

Figure Ref. No.	LBSUID	Grid Reference	Type	Parish/District	Name	Description	Status	Source
5	5/141	NZ 92175/08188	Listed Building	Hawsker Cum Stainsacre/ Scarborough	Long Lease Farmhouse and attached out buildings	<p>architrave with keystone, blocked fanlight. One small Gothic glazed window to right and modern casement.</p> <p>Farmhouse and outbuildings. Early 18<sup>th</sup> century, or earlier; raised and extended in late 19<sup>th</sup> century and 20<sup>th</sup> century alteration. House and outbuildings of squared sandstone, house raised in herringbone—tooled sandstone; extension of red brick in English garden wall bond, with herringbone—tooled sandstone quoins. Pantile roofs and brick stacks. Longhouse, extended to right. Original high end of 1½ storeys, 2 windows; 1½-storey, 1-window extension at right: 1½-storey, 3-bay low end at left, and lower 1-storey. One bay extension further left. High end has 20<sup>th</sup> century door inserted at centre. Small pane windows left of door and at far left, both in chamfered surrounds. Other ground floor windows are 20<sup>th</sup> century replacements, that to right in vestigial chamfered surround. Gabled and barge boarded half dormers with 4-pane sashes. Extension has large-pane tripartite ground floor window with centre sash, beneath segmental relieving arch. Raking dormer with 3-light, large-pane horizontal sliding sash. Coped gables and shaped kneelers. End and centre right stacks. Low end has 20<sup>th</sup> century cross-passage door in original opening and small-pane, tripartite window with centre sash at left. Other openings are doors. Coped left gable and shaped kneeler. Low end extension has board stable door, and coped left gable with plain kneeler.</p> <p>Interior of house: inglenook fireplace with heck survives in room to right of cross-passage. Boxed winder stair has plank door on butterfly hinges.</p>		
6	5/142	NZ 92175/08188	Listed Building	Hawsker Cum Stainsacre/	Range of farm buildings	<p>Range of byres. Early 19<sup>th</sup> century. Dressed sandstone with pantile roof. 1-storey, 3-bay range.</p>		

Figure Ref. No.	LBSUID	Grid Reference	Type	Parish/District	Name	Description	Status	Source
7	5/143	NZ 92225/08374	Listed Building	Hawsker Cum Stainsacre/ Scarborough	approximately one metre west of Long Lease Farmhouse All Saints Church	<p>Three board stable doors with timber lintels, and two large-pane horizontal sliding sash windows. Coped gables and plain kneelers. Range forms the north-west side of the Long Lease farmyard and is included for group value.</p> <p>Church. 1876-77. By E.H. Smales. Rockfaced sandstone on chamfered plinth; ashlar dressings. Slate roofs with red ridge tiles, originally pierced. Timber framed porch. 3-bay nave and south porch; central tower; chancel, and north organ chamber and vestry. Pointed 2-light west window with quatrefoil tracery, rolled sill moulding with foliate stops, and flat impost band. Glazed slit window in gable end. Stack pierces roof pitch to left of gable apex. Gabled porch, partly glazed, partly boarded in, contains flat ogee-arched doorway beneath tympanum with date carved in relief. Two windows to east of porch are of single and triple cusped lancets. Nave north side windows are of similar lancets, two paired and one single. Buttressed tower has lancet bell openings with scallop-edged louvres. Gabled staircase turret projects on north side behind pent vestry. Steeply hipped tower roof, with finials and cross. South side of chancel has one trefoil and one quatrefoil light, and on north side a cinquefoil. Three rectangular windows in north wall of vestry and organ chamber, and flat ogee-arched doorway in east return. East window is pointed, of three cusped lights beneath quatrefoil tracery. East gable cross. All gables coped.</p> <p>Interior Two massive cusped arches beneath tower, the west one with rolled hoodmould on floral stops. Cusped and gabled timber chancel screen. Several pretty tiled wall panels and monuments, notably that to Martha McCausland (d.1893) at west end of</p>		Pevsner, <i>The Buildings of England: Yorkshire, the North Riding</i> , p. 185.

Figure Ref. No.	LBSUID	Grid Reference	Type	Parish/District	Name	Description	Status	Source
8	5/145	NZ 92242/08141	Listed Building	Hawsker Cum Stainsacre/ Scarborough	Barn and Horse Engine House	<p>nave. Two original brass candelabra in nave. Several windows are worthy of note: three in north wall, one in south, and one in tower south wall, possibly mid 19 century, after Alfred Rethel. East and west windows probably by Powell's. The remainder are leaded with delicately tinted glass. Arch—braced king post roof with embattled ties, and quatrefoiled spandrels.</p> <p>Barn and horse engine house converted into a house. Barn early 19th century with horse engine house added between 1853 and 1892, conversion from 1996 for domestic use, still uncompleted by 2006. Barn constructed in partly, tooled and partly squared sandstone. horse engine house with piers in red brick with sandstone caps. New parapet roof covering similar to original with sandstone coping and ridges.</p> <p>Plan Central section of the barn open to the roof with a gallery on south east side Linking the rooms in the roof space at either end of the building. The barn is believed to have originally been subdivided with mezzanines at both ends with a central area open to the roof. Current subdivisions and flooring formed during the conversion. The horse engine house is hexagonal and attached to the southern end of the north east side of the barn. It remains open to its roof.</p> <p>Exterior All windows are modern timber frames without glazing bars or other embellishment. South west elevation, with near central former doorway, now a window with boarding below to retain the original form of the opening. Pitching window to right now repositioned with a second inserted to match. Two ventilation slits now blocked internally. North west gable end with former door now a window with boarding below, pitching window above</p>		



Figure 12.3 Ref. No.	LBSUID	Grid Reference	Type	Parish/District	Name	Description	Status	Source
						<p>at attic level. Coping terminates with plain kneelers. North east elevation with new plank door in original opening, ventilation slit to right, horse engine house to left. Horse engine house with spaces between the brick piers now infilled with glazing on the three sides away from the barn, the sides immediately adjacent to the barn infilled with vertical timber boarding.</p> <p>South east gable wall with single pitching style windows at ground and attic floor Levels. Coping terminates with plain kneelers.</p> <p><u>Interior</u> The barn's roof structure, not thought to be original, was replaced during the conversion. Roof and watts mainly, concealed by plaster. Horse engine house retains much of its original roof structure, sympathetically repaired. Also retains the principal tie beam and two secondary beams associated with the former horse engine. This includes part of the bearing for the vertical axel. These beams have also been sympathetically repaired. The wall of the barn facing the horse engine house is exposed as are the principal rafters and purlins of the roof.</p> <p><u>History</u> The barn is shown on the 1853 1:10560 Ordnance survey map, with the horse engine house added by the next map edition (the 1892 1:2,500 map). Note that the nearby Scarborough and Whitby Railway opened in the 1880's, possibly prompting the addition of the horse engine house and the use of bricks in its construction.</p> <p><u>Summary of Importance</u> Although now no longer in agricultural use, this former 19<sup>th</sup> century barn and horse engine house retains its distinctive plan form and plain external appearance, clearly indicating its earlier use. The survival of framework and roof structure in the hexagonal horse engine house is especially notable. The importance of the building is</p>		

Figure Ref. No.	LBSUID	Grid Reference	Type	Parish/District	Name	Description	Status	Source
9	5/146	NZ 92268/08534	Listed Building	Hawsker Cum Stainsacre/ Scarborough	Summerfield Farmhouse and attached garden walls, railings and gate piers	<p>further enhanced by the survival of other (also Listed) buildings of Long Lease Farm just across the road. The conversion of the building to domestic use has been undertaken within the Listed Building Consent system.</p> <p>Farmhouse and attached garden walls, railings and gate piers. Early 19<sup>th</sup> century house of tooled sandstone, rendered at rear, with Roman tile roof. Squared sandstone wall with cast iron railings and tooled sandstone gate piers. Central stairhall plan, 1½-rooms deep, with half outshut. 2-storey, 3-window front. 6-panel door beneath overlight, in open pedimented doorcase with fluted pilaster jambs. 12-pane sash over door and 16-pane sashes elsewhere. Painted sills and painted wedge lintels to all windows. Coped gables and shaped kneelers. End stacks. Garden wall with sloped coping carries horizontal railings; wall and railings ramped up at each end, and wall returned to house front. Square-section gate piers with pyramidal caps.</p>		RCHM, <i>Houses of the North York Moors</i> p.173; fig.309f.
10	5/147	NZ 92221/08825	Listed Building	Hawsker Cum Stainsacre/ Scarborough	Red Barn	<p>Barn and byre with loft. Mid-late 18<sup>th</sup> century. Red brick in English garden wall bond on squared sandstone plinth; sandstone dressings and pantile roof. 1½-storey, 2-bay front. Left and right-of-centre boarded-up doorways with segmental arches. One ventilation slit at left end, and two above. Coped gables and shaped kneelers.</p> <p>Left return gable end window with remains of 8-pane glazing.</p>		RCHM, <i>Houses of the North York Moors</i> , 1987: pp.43—44, 207, 220; figs.52—53, 400a.
11	21/150	NZ 92197/07530	Listed Building	Hawsker Cum Stainsacre/ Scarborough	Hawsker Hall	<p>House, now two dwellings. Early 18<sup>th</sup> century, enlarged in late 18<sup>th</sup> century; some 20<sup>th</sup> century alteration. Early part in roughly dressed, whitewashed sandstone; later part in red brick in Flemish bond on sandstone plinth, rendered on left return. Pantile roof with brick stacks.</p> <p>Early 18<sup>th</sup> century front: 2 storeys, 4 bays with</p>		RCHM, <i>Houses of the North York Moors</i> , 1987: pp.43—44, 207, 220; figs.52—53, 400a.

Figure Ref. No.	LBSUID	Grid Reference	Type	Parish/District	Name	Description	Status	Source
12	5/151	NZ 91336/07977	Listed Building	Hawsker Cum Stainsacre/ Scarborough	Dale Farmhouse	irregular fenestration; 1½-storey, 2-window range at right. Right-of-centre plank door beneath 6-pane overlight in 2-storey part. Windows on both floors are 12-pane sashes, two at left of door and one at right. Coped gables and shaped kneelers. End stacks. Lower end has 20 <sup>th</sup> century part-glazed door at right of 12-pane sash, and two 20 <sup>th</sup> century top-opening lights above. Coped gable at right, and left end stack. Late 18 <sup>th</sup> century front; 2 storeys, 6 windows. Centre-right, part-glazed door beneath overlight and bracketed hood. Ground floor windows are paired 12-pane sashes. First floor windows are also 12-pane sashes, single over the door and at far left, paired elsewhere. All windows have painted stone sills, painted wedge lintels and louvred shutters. Parapet partly obscures raking dormers with 4-pane lights in front range of double-span roof. Coped gables and right end and centre left stacks. House and outbuildings. Mid- 18 <sup>th</sup> century, probably incorporating remains of earlier house, of which present outbuilding formed part. Early 19 <sup>th</sup> century extension and 20 <sup>th</sup> century modernisation. 18 <sup>th</sup> century house has tooled sandstone front and rear, and squared sandstone sides; vertically tooled dressings and timber porch. 19 <sup>th</sup> century extension of tooled grey stone. Concrete pantile roofs and brick stacks. Outbuilding of squared sandstone with pantile roof. Central-entrance plan house with outshut, extension at right and outbuilding at rear. 2-storey, 3-window front, and 2-storey, 2-window extension. Door of six raised and fielded panels, with fanlight, in fluted doorcase with angle paterae; open-pedimented Doric porch. Window over door is 16-pane sash, the others 20-pane sashes, all with long lintels and painted stone sills. Cavetto-moulded eaves course. Coped gable and shaped kneeler at		

Figure 12.3 Ref. No.	LBSUID	Grid Reference	Type	Parish/District	Name	Description	Status	Source
						<p>left. End stacks. Ground floor windows in extension are tall 20-pane tripartite sashes with keyed replacement lintels: 16-pane sashes with plain lintels on first floor. Coped gable and shaped kneeler at right, and right end stack.</p> <p>Rear Full-height 'Gothic' staircase window beneath keyed round arch with imposts. Outbuilding: 1-storey, 2-bay range with 1-bay extension at left end. Three blocked ventilation slits, and plank and stable doors in quoined openings in original part.</p> <p>Interior of house: in room to left of entrance hall the fine moulded bressummer survives; plank and muntin partition wall to hall. Doorcase to extension room is fluted with angle paterae.</p> <p>Interior of outbuilding: two pairs of curved principal, crossed apex, trusses with collars and raised on ties. Extension to outbuilding not of special interest.</p>		

### *Prehistoric Period*

The Mesolithic period in Britain dates from around 8,000 BC. Mesolithic people were stone-age hunters, fishers and gatherers, living on the coastline and along rivers, but with no knowledge of farming. They used flint and other stones to manufacture sharp tools (Anderson 1991, 35-8); their settlements can now be identified by locating scatters of discarded stone tools, and the debris from their manufacture, in ploughed fields. It is likely that there were social changes within Britain at this time. Human activity had spread and reached the far north of Scotland. Excavations at Howick in Northumberland uncovered evidence of a large circular building, thought to be a dwelling which dates to c. 7,600BC. There are no such recorded sites or artefacts located within 1km of the study area.

There was a decisive change in the economy of prehistoric Britain shortly after 4000 BC, a change which traditionally has been considered one of the characteristic features of the Neolithic period. The Neolithic (or New Stone Age) period represents the arrival and establishment of agriculture as the principal form of economic subsistence. Over successive generations, farmers either moved slowly across Europe or had influenced local hunter-gathering populations to adopt the new economy (Mallory and McNeill 1991, 29). By c. 4500 BC farming communities existed along the Atlantic coast of Europe and soon afterwards they began to appear in Britain and Ireland (*ibid.*). The nature of the agricultural economy would have allowed for the new farmers to live in permanent settlements all year long (in marked contrast to the nomadic lives of the hunter-gatherers). As a consequence of the new way of life, new site-types begin to appear in the archaeological record during this period. Although there are no Neolithic or Bronze age sites located within the study area, it is likely that the area was settled during this period as evidenced by a range of recorded flint artefacts (see Table 12.3).

During the Neolithic and Early Bronze Age (c. 3500 - c. 1500 BC) a characteristic feature of farming communities in Ireland, and over much of Western Europe, was the practice of collective burial. The construction of the earliest earthwork sites in Britain began during the early Neolithic (4400-3300BC) in the form of long barrows. These are rectangular or trapezoidal earth mounds traditionally used for collective burials.

The Middle Neolithic (3300-2900BC) saw the development of site types such as cursus monuments which were large parallel lengths of banks with external ditches that were thought to have a ceremonial function. Chambered tombs and individual burials as well as stone circles also appear at this time. The Later Neolithic saw the introduction of new pottery types such as grooved ware. Henge enclosures were built along with stone rows and sites such as Stonehenge and Silbury Hill reached their climax.

The Beaker period arrived in Britain between c. 2700-2400BC. Several types of Beaker pottery have a fairly widespread distribution in western and central Europe. In Britain these pots are found in graves usually accompanying the unburnt skeletal remains of one individual in a crouching position (Waddell 1998, 114).

Metalworking arrived in the area c. 4000 years ago. By 2,150BC bronze was introduced and gradually replaced stone and copper as the main material for making tools. Britain had the largest reserves of tin and by 1,600BC the southwest of Britain was experiencing a trade boom as British tin was exported across Europe. Evidence of metalworking within the wider study area is noted by the discovery of a range of bronze artefacts (see Table 12.3).

A characteristic of the earlier Bronze Age in Britain is the emergence of a distinctive burial custom, often termed the 'single burial tradition' (Doody 1986; Waddell 1990; Waddell 1991), which was part of a wider European milieu. In the initial stages of this tradition both inhumation and cremation were practised. Burial in cairns (stone mounds), barrows and tumuli (earthen mounds) or cists (box-like and slab-built burial compartments) was fairly common. The results from excavations suggest a long tradition for these types of monument ranging in date from the Neolithic to Early Bronze Age times.

The later first millennium BC saw the introduction of iron working techniques from southern Europe. There is general agreement that the development of an iron technology was a significant factor in the eventual demise of bronze working on a large scale (Waddell 1998, 279).

Around 900BC there was a change in British society. This is evident from the number of hillforts that were constructed in this period. These hillforts lend support to the idea that society was becoming

increasingly hierarchal and complex and may even reflect tribal formation (*ibid.*). Likewise there was a notable influx of refugees from Gaul known as the Belgae. They were partially Romanised and as well as being responsible for creating some of the first larger settlements they also introduced pottery making techniques that were much more advanced than anything previously produced in Britain.

The Roman period in Britain lasted from the Claudian invasion in 43AD and ended in 410AD when the emperor Honorius informed *Britannia* that she 'must look to her own defenses'. (Frere 1967). Sheppard Sunderland Frere (*ibid.*) states that:

*"The civilisation of Roman Britain was a synthesis of things Roman and Celtic. Though it owed an incalculable debt to introductions from abroad and its preponderating element was imported from the civilisation of the Mediterranean, this civilisation took root in a Celtic land and enjoyed a native contribution: 'Romano-British' is a term not wholly synonymous with 'Roman'. Britain formed part of the Roman Empire for close on 400 years, a not inconsiderable slice of her total recorded history; and during this time there was ample opportunity for interaction and development. ..."*

While Britain was not unknown in the Classical world; by the fourth century BC the Greeks and Carthaginians traded for British tin; the first direct Roman contact did not come until 55BC when the Roman General Gaius Julius Caesar led an invasion. No territory was taken but he did establish some contacts. This was a relationship which was based on diplomacy and trade (Strabo). Rome also encouraged a balance of power in southern Britain and supported two powerful kingdoms; the Catuvellauni and the Atrebates (Creighton 2000).

The invasion of Britain in 43AD was led by Aulus Plautius and after capturing the south of the island the Romans turned their attention to Wales which was to continue for the following few decades (Tacitus 1931, 16-38). In 61AD while Gaius Suetonius Pualinus was campaigning in Wales, the south-east rose in revolt under Boudica, queen of the Iceni. Roman colonies were destroyed at Camulodunum, London and Verulamium and the revolt almost convinced Nero to retreat from Britain (*ibid.*).

In the 'year of the four emperors' as civil war raged in Rome, the governors in Britain were unable to control the legions there. Seeing an opportune chance Venutius gained control of the north of the country. When Vespasian eventually secured the empire the following years were spent conquering more of the island and hence increasing the size of Roman Britain (Caesar 1893). The high point the Roman occupation of Britain came about in 84AD with the defeat of the Caledonians by Agricola. The Romans settled along a defensible line along the Forth-Clyde isthmus (Suetonius 1979, 44-46).

By the beginning of the third century Britain has been described as defenseless to invaders and a report back to Rome in 207AD referred to barbarians 'rebellng and over-running the land, taking booty and creating destruction'. In the fourth century AD Britain saw increasing attacks from the Saxons in the east and the Irish in the west which eventually left Roman Britain in a prostrate state. By the late fourth century many buildings changed use and although there was a growing number of barbarian attacks these were focused on the vulnerable rural settlements rather than towns.

By the time of the Roman occupation, Britain's tin exports to the Mediterranean had been largely eclipsed by the supply from Iberia. Gold, iron, lead, silver, jet, marble and pearls were all exploited by the Romans in Britain together with hunting dogs, animal skins, timber, wool and slaves. Although mining had long been practiced in Britain, the Romans introduced new technical knowledge and large scale industrial production to revolutionise the industry.

#### *Romano-British settlement at Whitby*

The Notitia Dignitatum which dates to the late fourth-to-early fifth century contains one of the earliest references to the Whitby Roman station. It is referred to as Dictium (the place of the speeches) and appears as a garrison fort in the list of forces under the Dux Britanniarum. The name occurs again in the seventh century as Dixio Lugunduno.

There is a substantial record of evidence dating to the Romano-British period found at Whitby, particularly in the vicinity of Whitby Abbey (Scheduled Monument). Excavations during 1924-25 revealed Roman finds (although no Roman structures) and the location has been interpreted as a possible Roman signal station. The area was formerly known as Streonaeshalch, meaning 'the haven

of Streon', according to modern interpretation, however according to Bede it means 'fari sinus' or 'haven of the watch-tower'. There are a number of Roman signal stations strung out along the North Yorkshire coast which were part of a northern coastal defensive system. That thought to be located at Whitby has been noted as the centre of operations for this system of signal stations on the north-east coast of England.

A possible Roman culvert was recorded beneath a house in Bagdale (Nat. Inv. No. 29463); a possible Roman ford paved with tree trunks (Nat. Inv. No. 29464) and an alleged Roman ford site was identified close to the swing bridge (Nat. Inv. No. 29465). In addition to these sites, several Roman coins have been found in the area of Whitby whilst a Romano-British settlement site (SMR No. MNY23678) was discovered during topsoil stripping of a development site. The settlement is located less than 1km east of the proposed development site and revealed an enclosure, including a granary; round house and trough (see Table 12.2).

Jet is a hard, black variety of lignite and has been used since prehistoric times in the manufacture of jewellery. It occurs in underwater outcrops off the north-east coast at Whitby where the nodules of the material were collected along the beach at low tide. A number of carved items made from sea-jet have been recovered from the environs of Whitby which are also found at other Roman settlements throughout Britain and it is possible that there was a small industry at Whitby, exporting finished carvings. A bear, pins, pendants, rings and also blocks of uncut Whitby sea-jet were discovered in Eburacum (York, North Yorkshire).

#### *The early medieval period (AD 400 – 1169)*

The conquest of England in 1066 is considered a point of crucial change in the country's social economic and political life. The early medieval period in Britain saw the arrival of new religious orders from the continent and the Benedictines and the Cistercians founded many new churches throughout the country. The new Norman aristocracy also constructed great cathedrals as a symbol of the relationship between church and state.

Whitby Abbey is located north of the proposed development site and was originally founded as a double house priory in 657AD and destroyed by the Danes c. 867AD. It was refounded as a Benedictine Priory by 1077 however it lapsed to then be re-established as a Benedictine Abbey by 1109. It was eventually dissolved in 1539. The church was left intact after the Dissolution and was almost complete as late as 1711 however it is now in ruins. The earliest part of the church dates from 1220 and there are also fourteenth century additions. (Whitby Abbey is a scheduled monument; listed building and in guardianship).

#### *The late medieval period (AD 1169 – 1600)*

The arrival and conquest of large parts of the country by the Anglo-Normans (or more correctly Cambro-Normans) in the late-twelfth/early thirteenth century marks a watershed in the political history of Britain. The remains of castles built by the Normans at this time often survive in the form of mottes (Kenyon 1990). A motte is a conical, flat-topped, earthen mound, artificially raised and often surrounded by a fosse. In many cases a bailey or embanked enclosure was built to one side of the motte. Atop these mottes was a wooden superstructure, with a palisade and tower and these sites are often referred to as 'timber castles'. In the years immediately following the Norman Conquest saw some of the largest mottes in the country being built. By the late thirteenth/early fourteenth century, the Anglo-Normans began constructing moated sites and rectangular enclosures. These are square, rectangular or trapezoidal enclosures. Their main defensive feature is a wide, often waterlogged, fosse with an internal bank. There is a scheduled moated site located at Hawsker Cum Stainsacre; c. 700m northeast of the proposed development site (Nat. Inv. No. 29556). There are remains of a medieval moated site enclosing a modern farm that contained earthworks, a fishpond, garden, manor, moat and ridges and furrows. The manor was documented in 1394 and was held by Whitby Abbey until the Dissolution.

As in the case of ringforts, these enclosures protected settlements; the buildings, usually of wood, seldom leave any visible surface trace today. There are many rectangular enclosures located in the country, which cannot be confidently classified as moated sites. This may be due to interference with the standing remains, uncertainty as to their date, or because the site is known only from cartographic, documentary or aerial photographic evidence.

Ringworks are generally circular earthworks which consist of a bank and ditch or may be D-shaped where a natural scarp formed part of the defences (Kenyon 1990). There are c. 200 ringwork castles dating to the period between 1066 and 1215 in Britain. Ringworks would have been quicker to construct than a motte-and-bailey. They were seen to be a quick and effective form of castle that aided the Normans during their advancement and occupation of Britain (*ibid.*).

During the eleventh, twelfth and thirteenth centuries England, like most of Western Europe, began to grow in population and wealth. Improved methods of technology led to agricultural expansion (Muhlberger 1999). This increase in agricultural production led to the transformation of small villages into urban centres (*ibid.*). Whitby town itself is a medieval town (Nat. Inv. No. 918848) that is referenced in documentary sources dated to 1128; 1177 – 1189 and 1201. Buildings of note located within the wider study area and dating to the medieval period include the Hospital of St. Michael (Nat. Inv. No. 29841) and Hospital of St. John the Baptist (Nat. Inv. No. 29840). The former was a leper hospital founded in 1109 at a site granted by William de Percy, Abbot of Whitby, to a leper called Orm. A monk was later appointed master and the hospital had a chaplain, brothers and sisters. The hospital was dependent on and managed by the abbey and was probably in use until the suppression in 1539. Its site is still identified by the name Spittal Bridge. The Hospital of St. John the Baptist was first documented in 1320 and said to be located to the north of Whitehall. At this time there was a warden, brethren and sisters and was still in use in 1401 but not by 1407-08.

#### *The post-medieval period (AD 1600 - Present)*

The English Renaissance was essentially a cultural movement in England that was heavily influenced by the Italian Renaissance. Early modern Britain began at the end of the War of the Roses and brought a time of peace and stability to England. The power of the monarch increased and under the Tudors the English state was centralised and a bureaucracy was established.

Settlement continued to thrive in the area of Whitby and there are three recorded longhouses located at Hawsker Cum Stainsacre, located north of the proposed development site (Nat. Inv. Nos. 531507, 531506 & 531500).

The Scarborough and Whitby Railway was also established and built within the wider study area, opening in 1885. It was purchased by the North Eastern railway in 1898 and closed to passengers in 1965.

Recent archaeological assessment and monitoring as part of development-led projects have uncovered post-medieval remains such as a former stables (EHNMR - 1321334); stratified medieval deposits (EHNMR – 1330836) and foundations of a medieval building at 49-50 Baxtergate (EHNMR – 132133) (see Table 12.2).

There are several listed buildings within the wider study area that also date to the post-medieval period including Mount Farmhouse; Lodge Farmhouse; Broomfield (house); Long Lease Farmhouse; Summerfield Farmhouse; Red Barn; Hawsker Hall and Dale Farmhouse (see Table 12.4).

Broomfield is located c. 600m southwest of the proposed development site. It dates to circa 1800 and is of three storeys, in ashlar, the top storey being a dummy with painted trompe l'oeil windows. There are two stone chimneys at the gable ends. It has a slate roof with capped gables with kneelers and two windows with moulded flush frames, double-hung sashes with glazing bars. There is a central long-rounded headed staircase window with keystone and blocks. The house retains Gothic glazing. The front entrance is a modern door in round-headed blocked architrave with a keystone and blocked fanlight. There is one small Gothic glazed window to right and modern casement.

#### **Field Survey Assessment**

A walkover survey of the proposed development site was undertaken in December 2006. All areas were accessible and the field was systematically walked and assessed in terms of landscape, land use, vegetation cover, presence or lack of archaeological sites and potential for undetected archaeological sites/features. Weather conditions were bright with a low-lying winter sun. A photographic record is presented in Appendix 12.1.



The proposed site is bounded by a post and rail field boundary to the southwest, hedgerow with post and rail to the southeast, post and wire to the northeast and hedgerow with post and wire to the northwest. All fencing is relatively new and the hedging is sparse in places.

The proposed development site consists of a rectilinear field currently under pasture and contained grazing cattle at the time of field survey. Although the ground surface was disturbed by the livestock due to the time of year it was observed that despite being muddy, the site was not flooded following heavy rain and it is unlikely that it would have been subjected to flooding in the past.

The site generally slopes down towards the south and west. In the north-eastern portion of the site, the ground slopes towards the north and west into a bowl overlooking a stream below. The stream forms part of Spital Beck river which traverses in a southeast/northwest direction, north of Whitby Industrial Estate.

There is a water trough located in the south-western corner of the proposed site, adjacent to a stile and gate in the south-eastern boundary. It is presumed that the trough is fed from a farmstead located to the south (see Appendix 12.1, Plate 3). A panoramic view of the site is provided in Plates 4, 5 & 6, Appendix 12.1 as viewed from the stile at the south-western corner of the site.

A public right of way traverses the site from roughly north to south, over stiles at each entrance/exit to the field.

There are no statutory cultural heritage constraints located on or immediately adjacent to the proposed development site at Whitby Industrial Estate. During field survey, no potential archaeological features were observed directly on the proposed development site. However, in a field located south-west of the site and immediately south of Enterprise Way Business Park, potential earthworks features were observed. The field is currently under pasture and the earthworks were unable to be characterised as a specific type. It is also possible that these features are a result of modern dumping/spoil from construction of the business park. The south-eastern boundary of this field is comprised of a stone wall with dressed cap stones (see Plate 1, Appendix 12.1).

## 12.4 Impacts

There are no protected archaeological sites or listed buildings located on or immediately adjacent to the proposed development site at Whitby Industrial Estate. A review of conservation areas; areas of townscape character; Historic parks, Gardens and Demesnes and the Buildings at Risk Register has indicated that no such areas/buildings exist on or adjacent to the site. A field survey of the site was undertaken by a suitably qualified archaeologist and no features of archaeological or built heritage interest were observed.

There are a number of recorded archaeological sites; sites that have been previously excavated and listed buildings located within the wider study area (see Tables 12.1, 12.2 & 12.4). However none of these cultural heritage constraints will be affected by the proposed development.

The historic medieval town of Whitby is located west/north west of the proposed development site. The earliest records of the town date to 1128 however Whitby Abbey had been established as a double priory house in the early medieval period by 657AD suggesting that settlement in the study area pre-dates the urban medieval core of Whitby. This is also substantiated by the range of artefacts found in the area dating from prehistoric, Roman and medieval times. Excavations at an area west of the proposed development site during topsoil stripping (SMR No. MNY23678) revealed extensive Iron Age/Romano-British settlement evidence in the form of an enclosure, granary, roundhouse etc. There is a moated site (scheduled) located c. 700m north-east of the proposed development site comprising a manor, moat fishpond, garden etc. and dating to at least 1394.

All of the recorded archaeological evidence from the study area suggests that the proposed site may potentially contain similar settlement activity. Also, its proximity to the stream located to the north-east and the presence of well-drained soils increases its suitability as a habitation area. Possible earthworks observed during field survey located in an area southwest of the proposed development site may indicate sub-surface archaeological remains. There may potentially be an impact on sub-

surface archaeological remains or the possibility of uncovering stray finds within the proposed development site.

## 12.5 Mitigation

All archaeological activities regarding the proposed development site will be subject to discussion with, and approval from the North York Moors National Park Authority and English Heritage.

The primary aim of mitigation strategies is to ensure that, where the proposed development directly affects or encroaches on a heritage site, the correct procedures will be established to protect the site or to minimise the direct impact on that site.

The proposed development at Whitby Industrial Estate does not impact any sites or buildings under statutory protection. However there is potential to reveal hitherto unrecorded archaeological remains within the proposed site due to the high volume of recorded archaeological activity within the study area. As such, it is recommended that the site is monitored by a suitably qualified archaeologist during topsoil stripping and associated ground preparation works of the site, prior to construction.

- Prior to the commencement of any development, a programme of phased cultural heritage investigations should be agreed between the client, relevant local authorities and English Heritage.
- The archaeologist will be empowered to halt the proposed development if buried archaeological features or finds are uncovered. Provisions should be made to resolve any newly exposed archaeological sites.
- Any archaeological sites that are subject to unavoidable partial or total destruction should be fully archaeologically excavated, therefore preserving the sites by record. This should be carried out by a suitably qualified archaeologist.

## 12.6 Residual Impact

The proposed development has been assessed with regards to its impact on known and potential cultural heritage constraints on or adjacent to the site. Whilst there are a number of recorded archaeological sites within the wider study area, none of these constraints will be affected by the proposed development.

## 12.7 References

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## 13.0 INTERACTIONS

### 13.1 Introduction

This chapter describes the interactions between the various aspects of the environmental impact assessment for the proposal. This is a requirement of the European Community (Environmental Impact Assessment) (Amendments) Regulations, 1999.

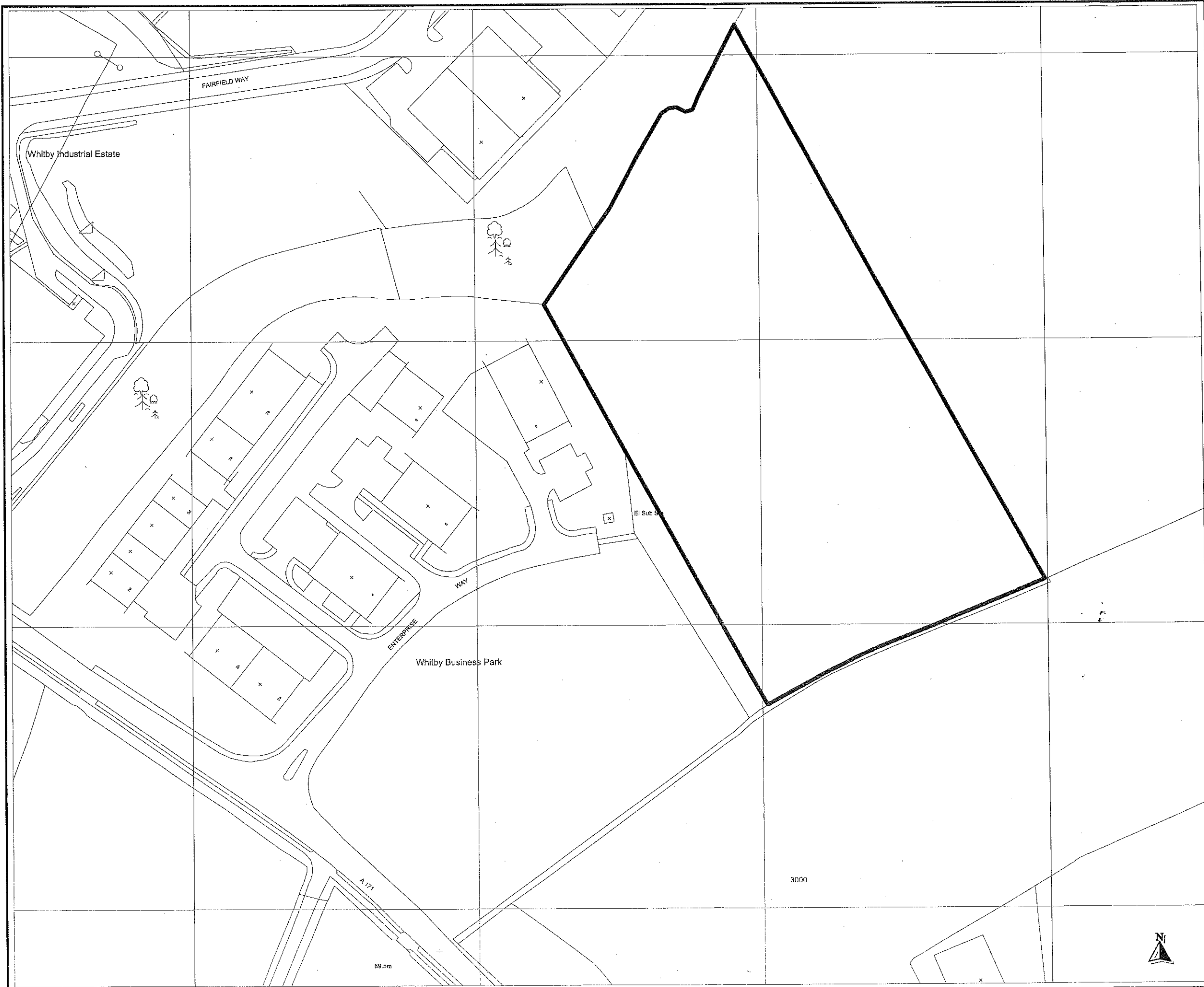
### 13.2 Interactions

Table 13.1 below identifies each section of the environmental statement where the impacts or environmental effects of specific topics within the environmental statement interact between each other. The most likely interactions to occur are those between the human environment and other potential impacts on environmental media.

**Table 13.1 Interactions**

Chapter	Interacts With
Planning Policy	Human Environment and Socio-Economic, Landscape and Visual, Ecology
Human Environment and Socio-economic	Planning Policy, Noise, Air Quality, Human Environment and Socio-Economic
Water Quality & Drainage	Ecology, Geology and Soils
Ecology	Water Quality & Drainage, Landscape, Planning Policy
Geology and Soils	Water Quality & Drainage
Landscape and Visual	Planning Policy, Ecology
Air Quality	Human Environment and Socio Economic, Traffic
Noise	Human Environment and Socio Economic, Traffic
Cultural Heritage	Planning Policy
Traffic	Human Environment and Socio-Economic, Noise
Hydrogeology	Water Quality & Drainage

## FIGURES



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**LEGEND**  
 — Proposed Site

**Issue Details**

Drawn: BT	<b>Proposed Industrial Units Enterprise Way, Whitby</b>	
Chkd: GB	Drawing No.	Rev.
Appd: RH	01	Revision 02
Date: April 2007		
Scale: 1:1,250		

**RPS Planning & Environment**

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 NEWRY

Project: **Proposed Industrial Units  
Enterprise Way, Whitby**

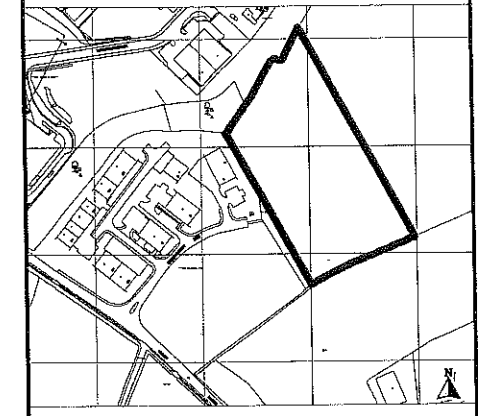
Title: **Site Location**

Figure Number: 1.1

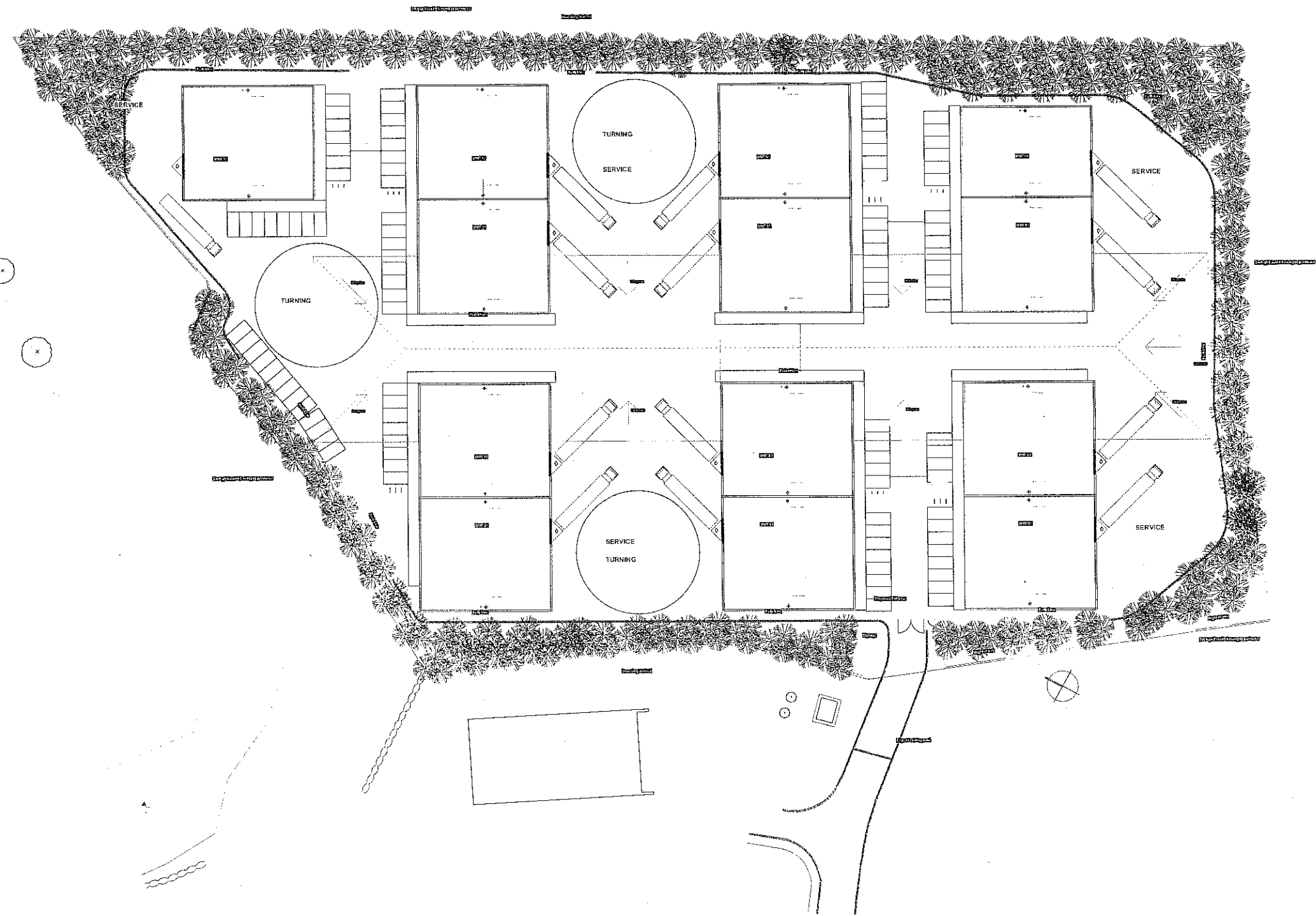
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**LEGEND**

— Proposed Site



For detailed and to scale drawing of the proposed site layout refer to Drawing Number: 06041 D/L (2-) 01 Rev H



**Issue Details**

Drawn: SMcA	<b>Proposed Industrial Units Enterprise Way, Whitby</b>	
Chkd: GB		
Appd: RH		
Date: April 2007	Drawing No. 01	Rev. Revision 02
Scale: Not to Scale		



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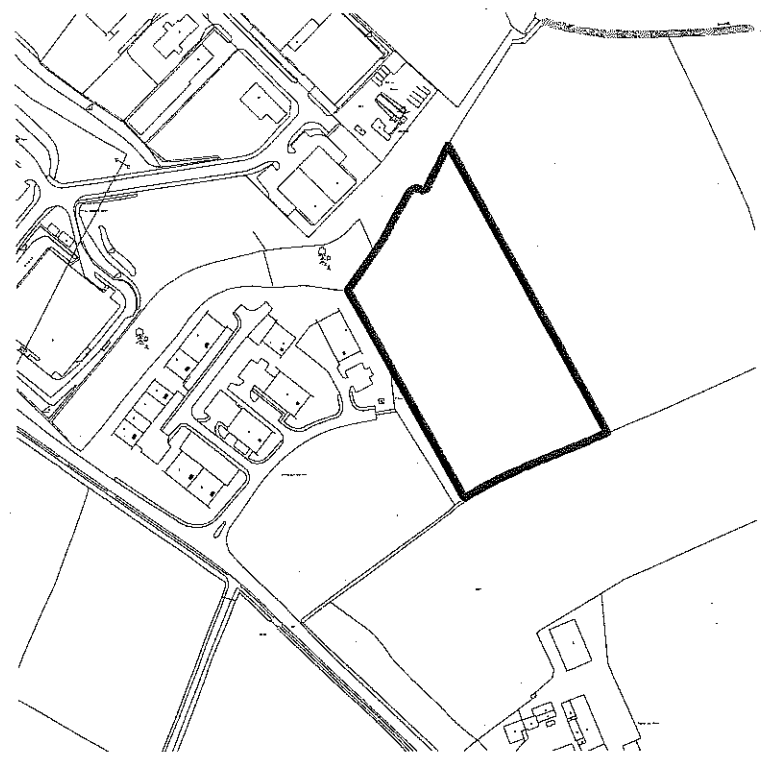
Project: *Proposed Industrial Units Enterprise Way, Whitby*

Title: **Proposed Site Layout**

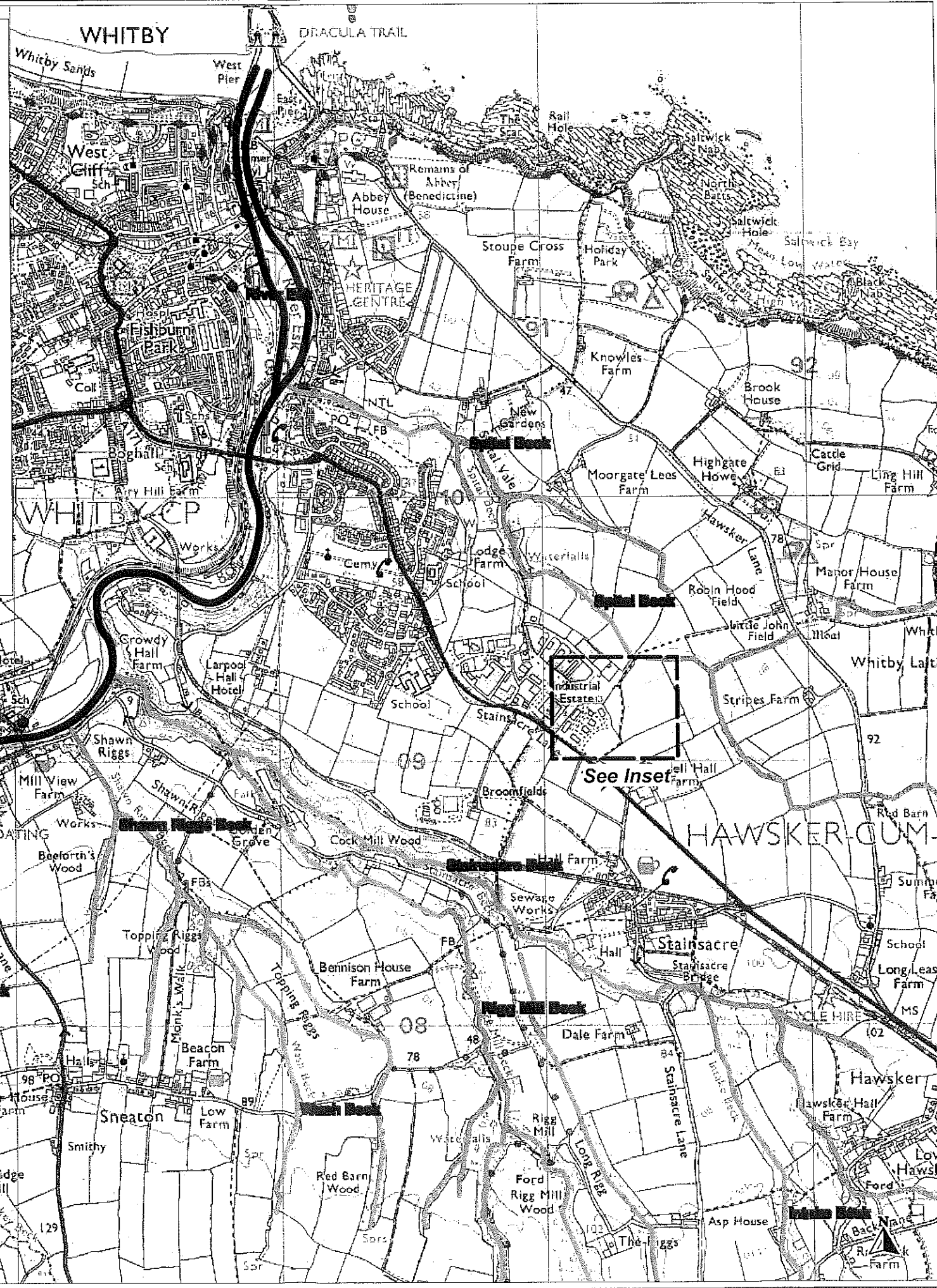
Figure Number: 2.1



Detailed OS Map of Proposed Development Site






WHITBY



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LEGEND

-  Proposed Site
-  River Esk
-  Tributaries

See Inset

Issue Details

Drawn: SMcA	<b>Proposed Industrial Units Enterprise Way, Whitby</b>	
Chkd: GB		
Appd: RH		
Date: April 2007	Drawing No. 6.1	Rev. Revision 02
Scale: -		



Client: SEAVIEW PROPERTY DEVELOPMENTS LTD NEWRY

Project: **Proposed Industrial Units Enterprise Way, Whitby**

Title: **The Water Environment**






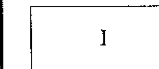
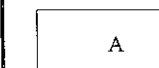


Figure Number: 6.1





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**LEGEND**

-  Proposed Site
-  Site Location
-  Hedgerow
-  Scattered trees
-  Immature Sycamore
-  Improved Grassland
-  Arable Land
-  Mole & Rabbit Evidence
-  Trees

**Issue Details**

Drawn: RF	<b>Proposed Industrial Units Enterprise Way, Whitby</b>	
Chkd: GB		
Appd: RH	Drawing No.	Rev.
Date: April 2007		Revision 02
Scale: -		



Client: SEANVIEW PROPERTY DEVELOPMENTS LTD  
 NEWRY

Project: **Proposed Industrial Units  
Enterprise Way, Whitby**






Title: **Areas of Ecological Interest**

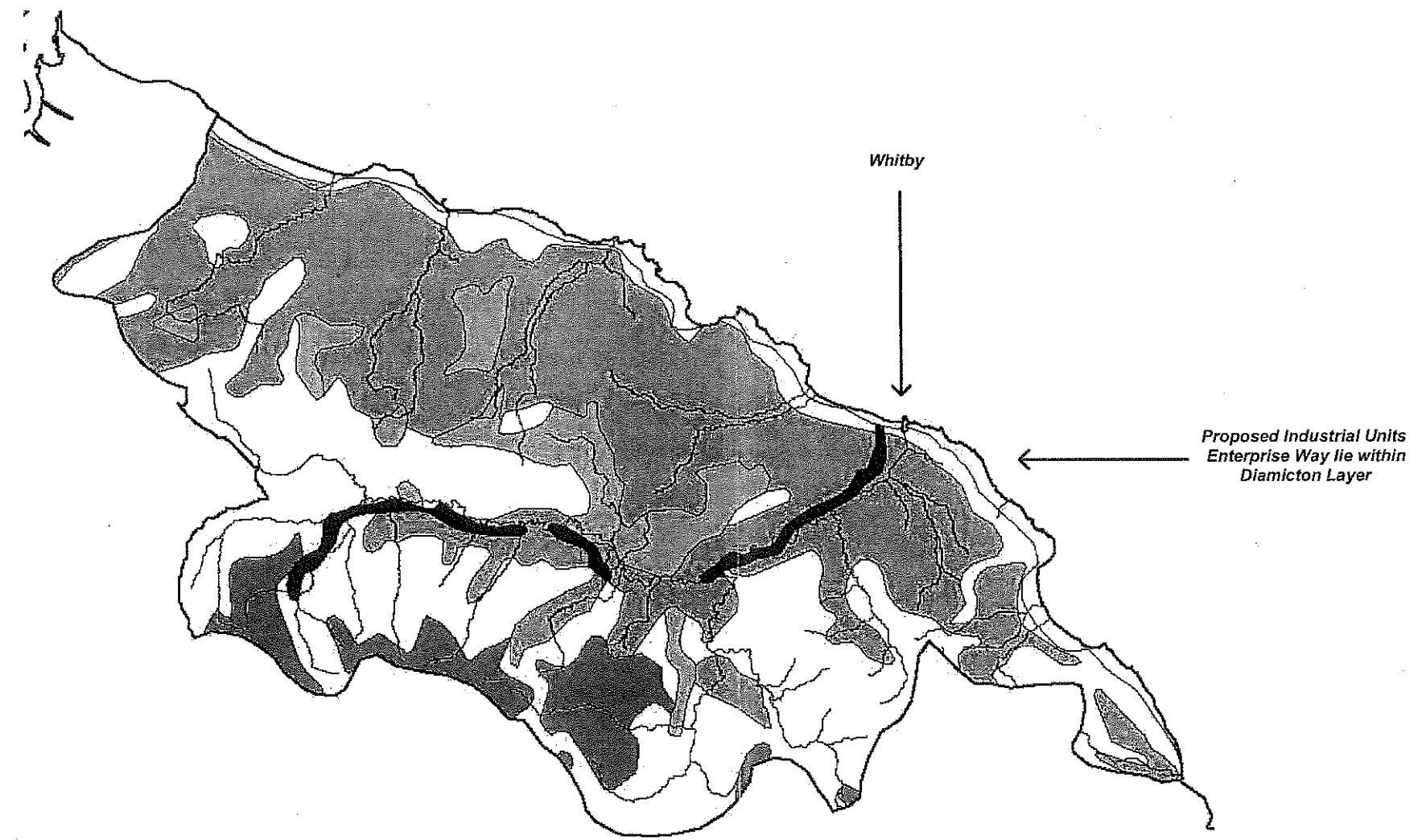
Figure Number: 7.1



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**LEGEND**

- KEY**
- Drift Geology**
-  CLAY, SILT AND SAND
  -  Composite of several SOLID ROCK lithologies. See UNKN & DRFT
  -  DIAMICTON
  -  PEAT
  -  SAND AND GRAVEL



<b>Issue Details</b>		
Drawn: SMC/A	<b>Proposed Industrial Units Enterprise Way, Whitby</b>	
Chkd: GB		
Appd: RH		
Date: April 2007	Drawing No.	Rev.
Scale: -	8.1	Revision 02
Source: Environment Agency - Esk and Coastal Streams CFMP		



Client: SEAVIEW PROPERTIES LTD NEWRY

Project: **Proposed Industrial Units Enterprise Way, Whitby**

Title: **Drift Geology**











Figure Number: **8.1**

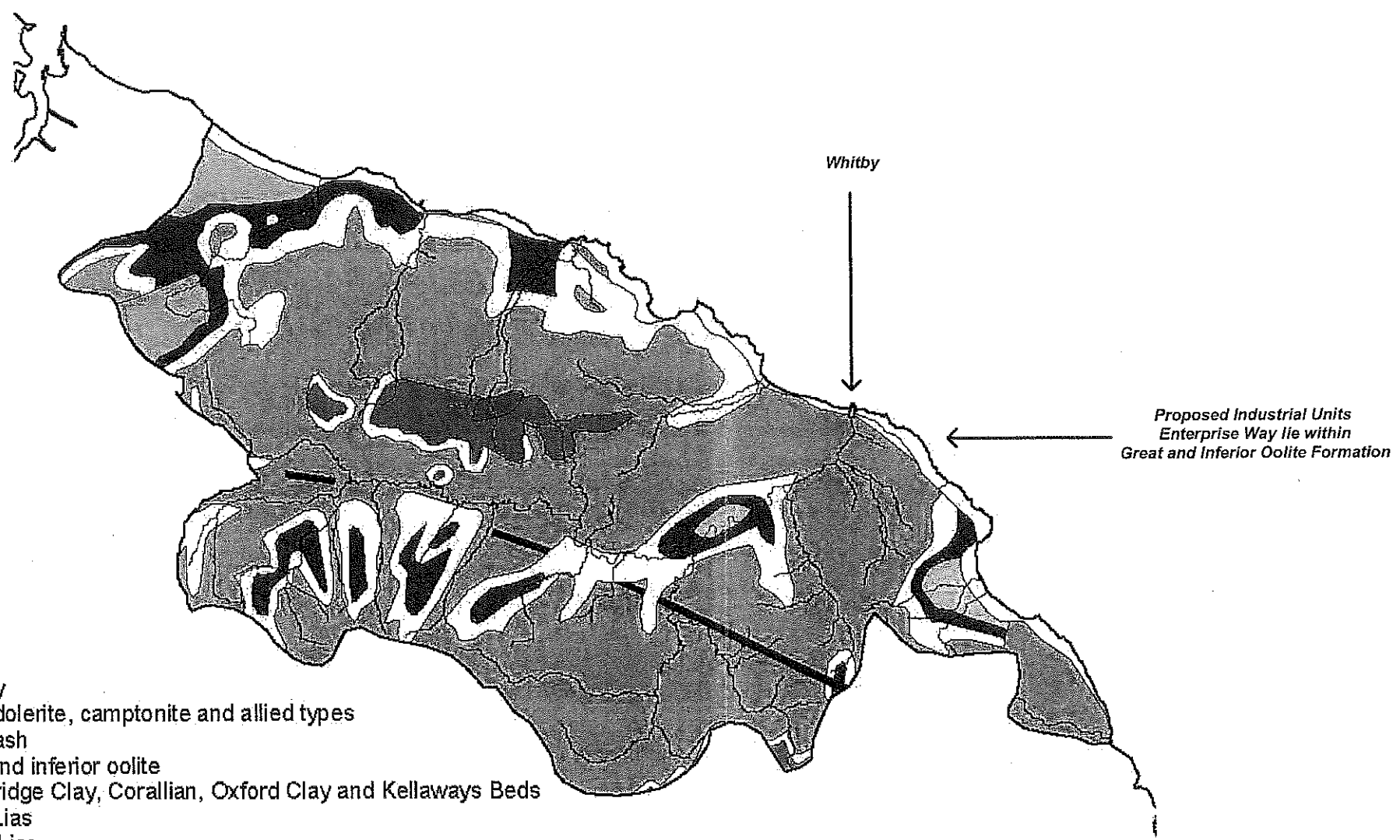


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**LEGEND**

**KEY**

- Solid Geology**
-  Basalt dolerite, camptonite and allied types
  -  Cornbrash
  -  Great and inferior oolite
  -  Kimmeridge Clay, Corallian, Oxford Clay and Kellaways Beds
  -  Lower Lias
  -  Middle Lias
  -  Open Water
  -  Oxford Clay and Kellaways Beds
  -  Upper Lias
  -  Upper, middle and lower lias, Lower Jurassic



**Issue Details**

Drawn: SMCA	<b>Proposed Industrial Units Enterprise Way, Whitby</b>	
Chkd: GB		
Appd: RH		
Date: April 2007	Drawing No. 8.2	Rev. Revision 02
Scale: -		
Source: Environment Agency - Esk and Coastal Streams CFMP		



Client: SEANNEW PROPERTIES LTD NEWRY

**Project: Proposed Industrial Units Enterprise Way, Whitby**

**Title: Solid Geology**

**Figure Number: 8.2**





**Notes**  
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---

**LEGEND**

— Proposed Site  
 → Viewpoints

---

**Issue Details**

Drawn: BT	<b>Proposed Industrial Units Enterprise Way, Whitby</b>	
Chkd: GB		
Appd: RH		
Date: April 2007	Drawing No. 01	Rev. Revision 02
Scale: -		

---

**RPS Planning & Environment**

Client: SEAVIEW PROPERTY DEVELOPMENTS LTD  
NEWRY

---

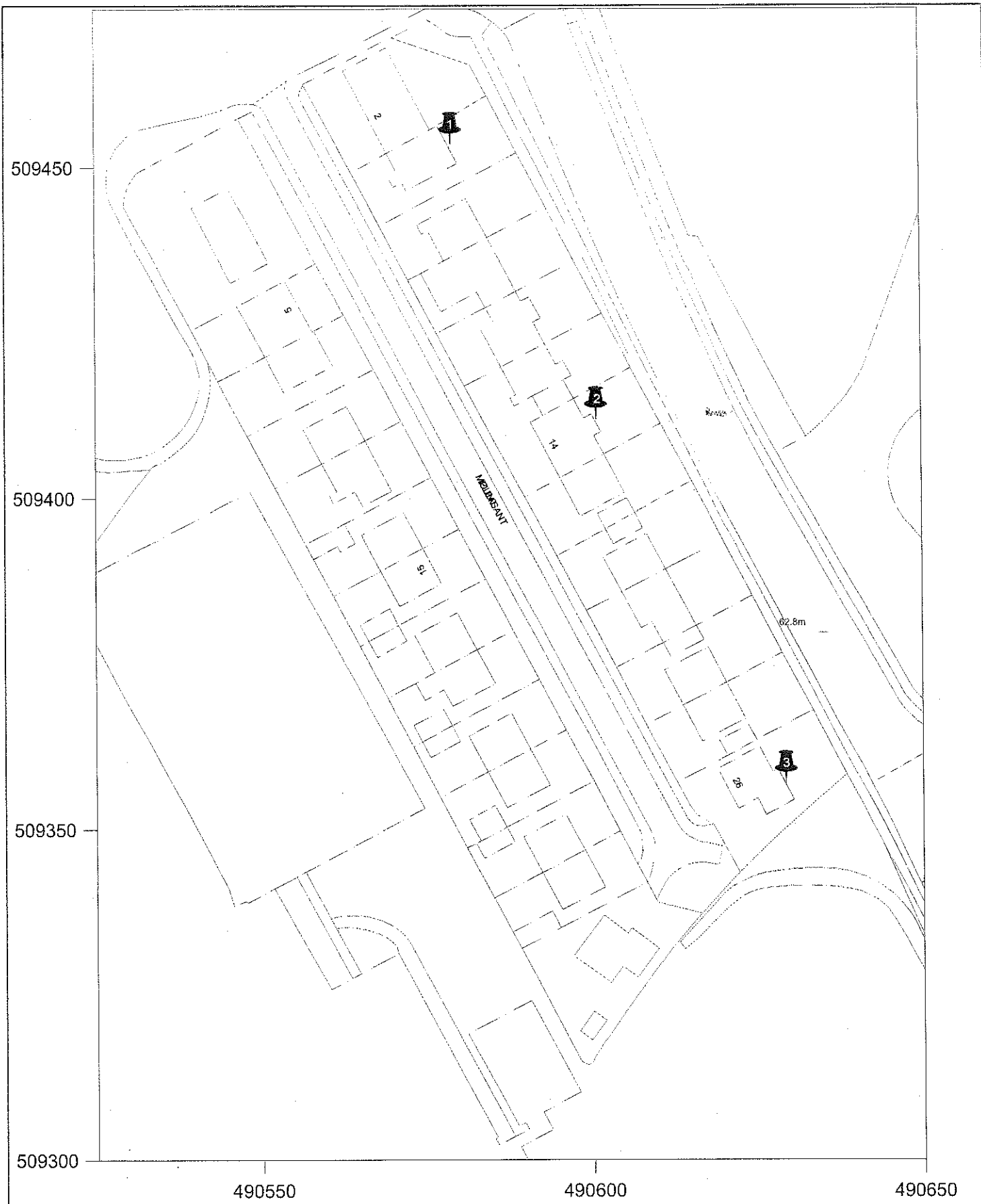
**Project: Proposed Industrial Units Enterprise Way, Whitby**


---

**Title: Viewpoints**

---

**Figure Number: 9.1**

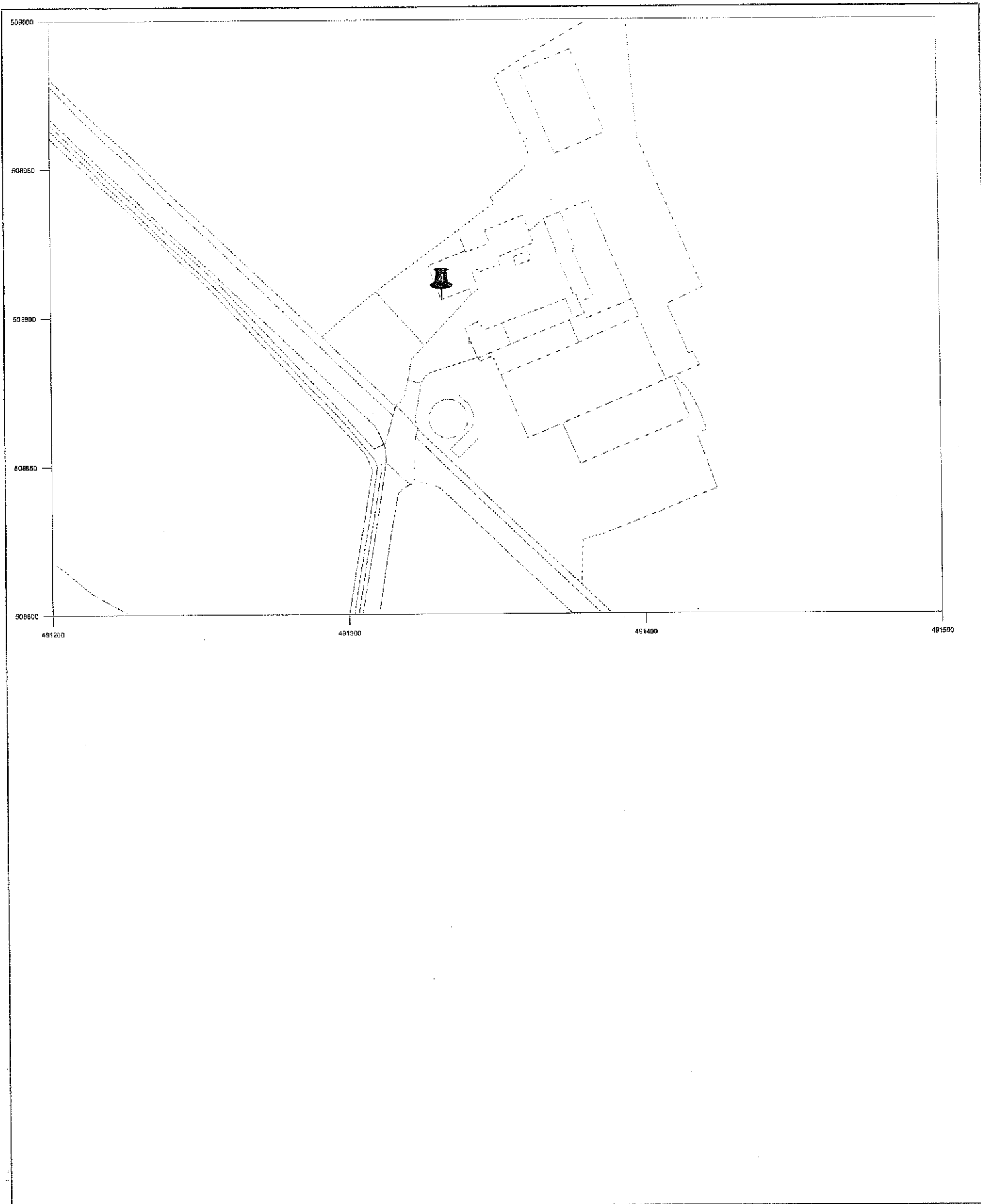


 Sensitive Receptor

**Figure 10.1**  
**Sensitive Receptor**

SS 100-1 White Air Quality, 20th January, 2017





 Sensitive Receptor



**Figure 10.2**  
**Sensitive Receptor**

AS/NZS 1100:2007 Air Quality 22nd edition 2007



Notes  
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**LEGEND**

-  Proposed Site
-  Noise Monitoring Locations

**Issue Details**

Drawn: SC	<b>Proposed Industrial Units Enterprise Way, Whitby</b>	
Chkd: SMCa		
Appd: RH		
Date: April 2007	Drawing No. 01	Rev. Revision 02
Scale: -		

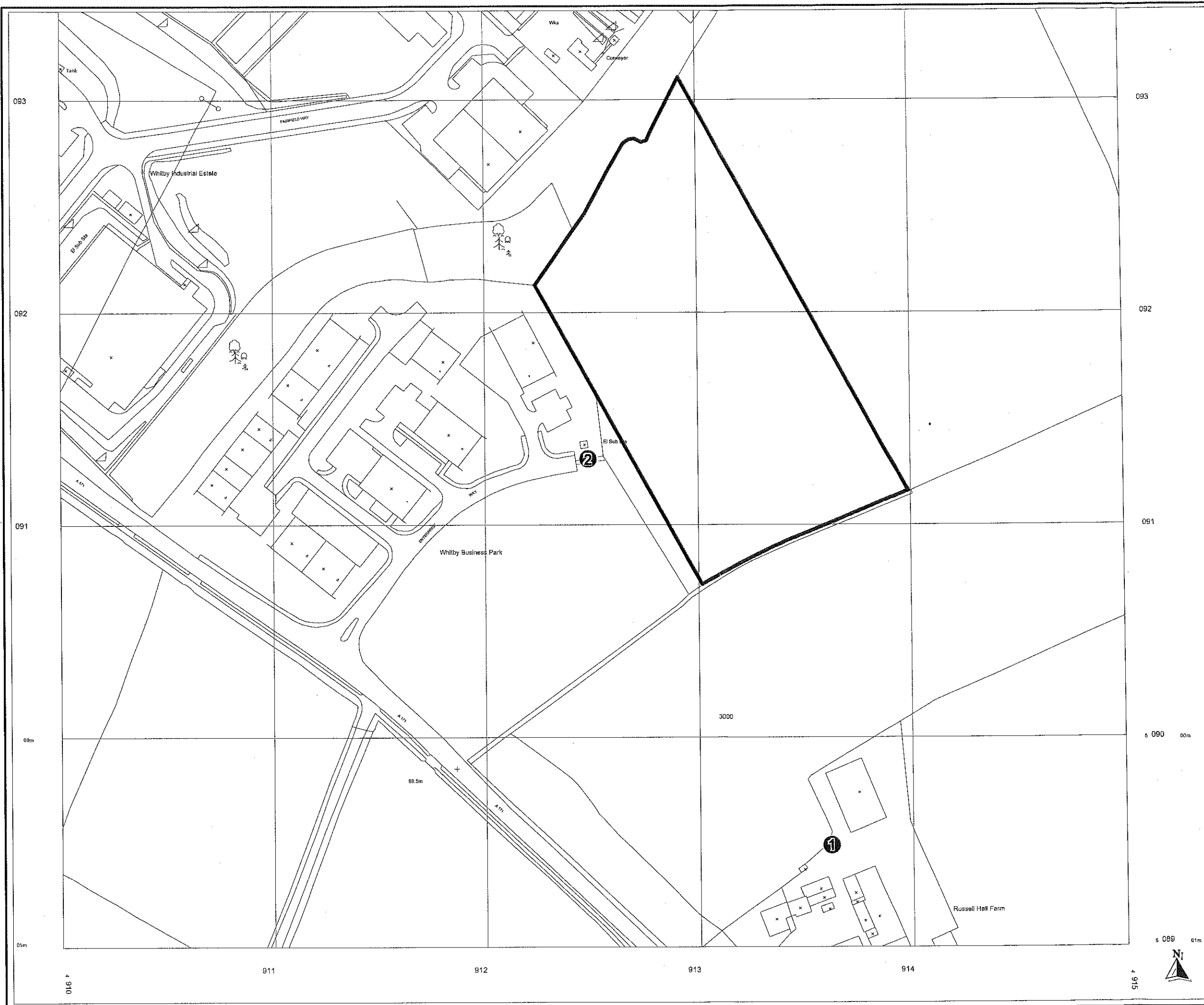


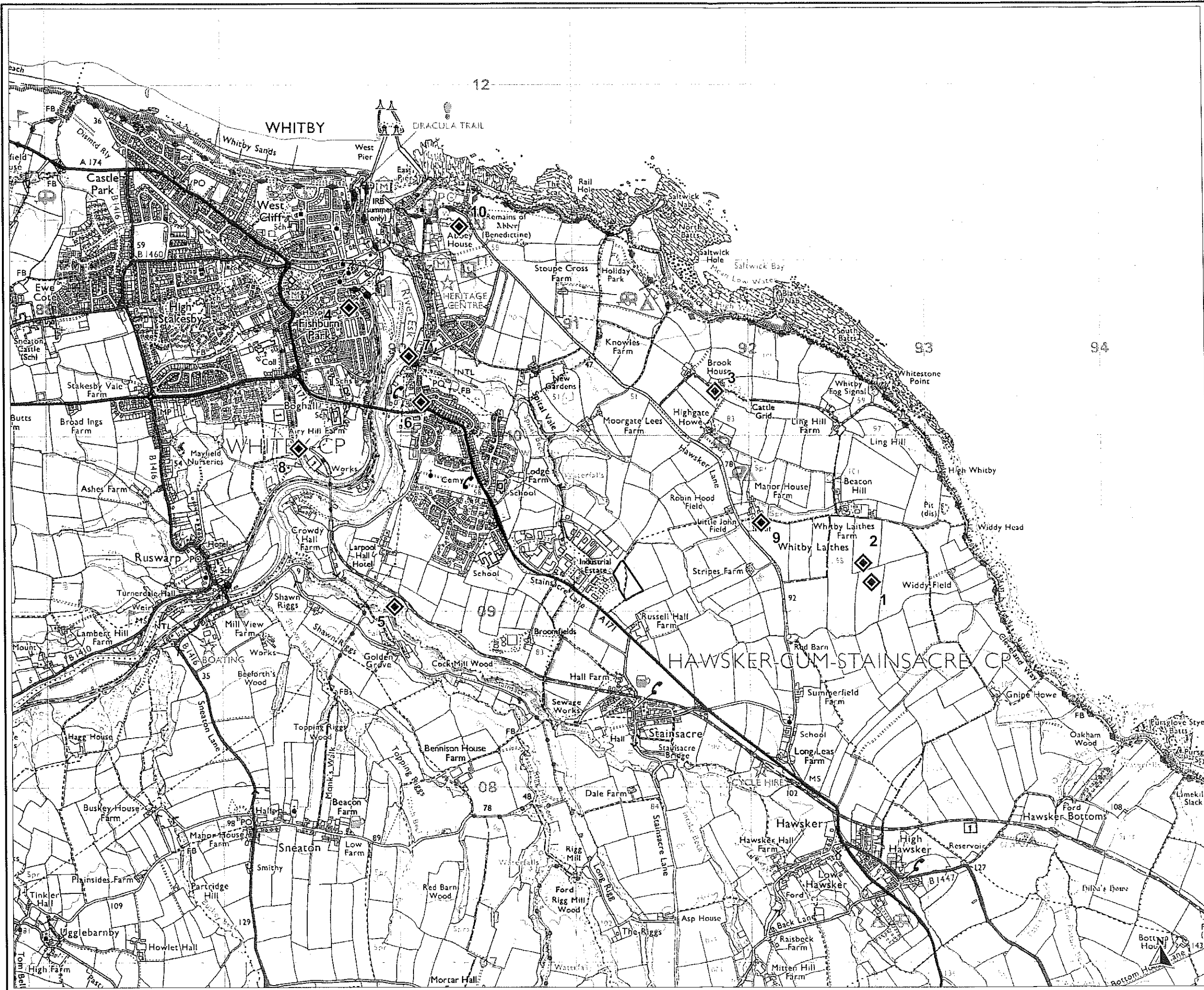
Client: SEAVIEW PROPERTY DEVELOPMENTS LTD NEWRY

Project: **Proposed Industrial Units Enterprise Way, Whitby**

Title: **Noise Monitoring Locations**



Figure Number: 11.1





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**LEGEND**

-  Proposed Site
-  Archaeological Sites (refer to Table 12.1)

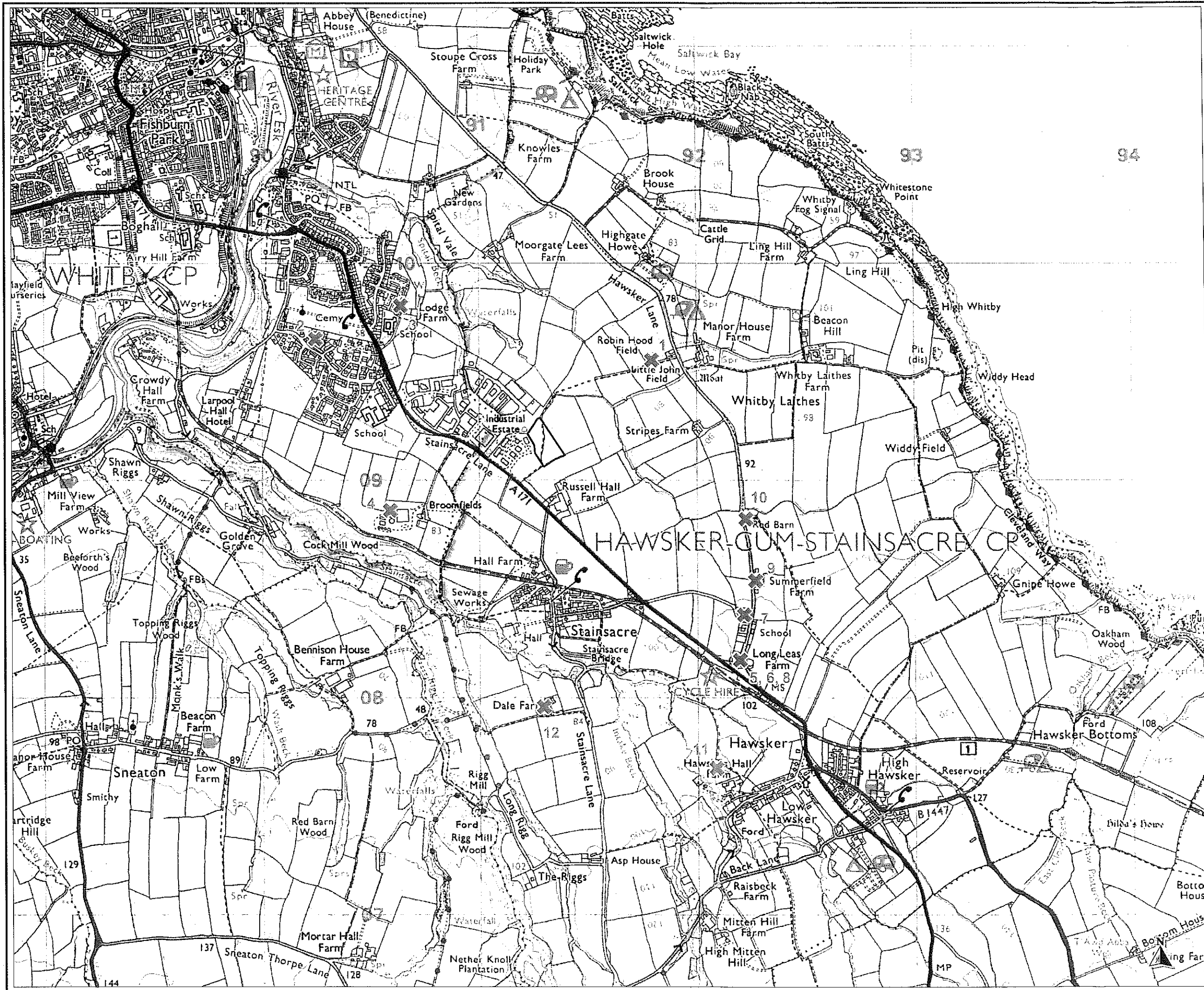
<b>Issue Details</b>	
Drawn: BT	<b>Proposed Industrial Units Enterprise Way, Whitby</b>
Chkd: GB	
Appd: RH	
Date: April 2007	Drawing No. 01
Scale: 1:1,250	Rev. Revision 02



Client: SEAVIEW PROPERTY DEVELOPMENTS LTD  
 NEWRY



**Project:** Proposed Industrial Units Enterprise Way, Whitby  
**Title:** Location of Archaeological Sites  
**Figure Number:** 12.1





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**LEGEND**

-  Proposed Site
-  # \* Location of Listed Buildings (refer to Table 12.4)

<b>Issue Details</b>		<b>Proposed Industrial Units Enterprise Way, Whitby</b>	
Drawn: BT	Chkd: GB	Drawing No. 01	Rev. Revision 02
Appd: RH	Date: April 2007		
Scale: 1:2500 @ A3			

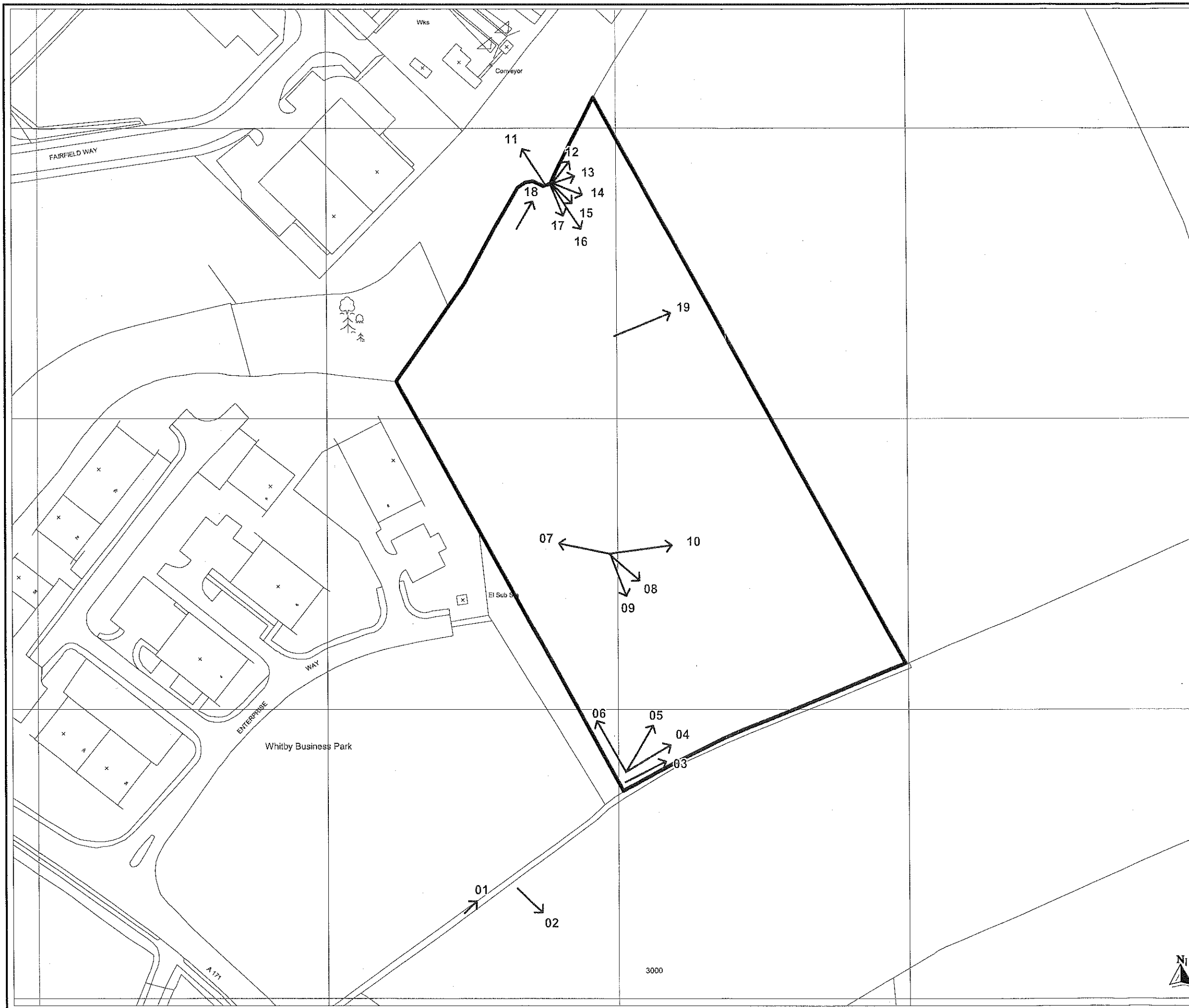


Client: SEAVIEW PROPERTY DEVELOPMENTS LTD  
 NEWRY

Project: **Proposed Industrial Units Enterprise Way, Whitby**



Title: **Location of Listed Buildings**

Figure Number: 12.2



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**LEGEND**

-  Proposed Site
-  # Direction of Photographic Record (see Appendix 12.1)

**Issue Details**

Drawn: AM	<b>Proposed Industrial Units</b>	
Chkd: GB	<b>Enterprise Way, Whitby</b>	
Appd: RH	Drawing No. 01	Rev. Revision 02
Date: April 2007		
Scale: 1:1250 @ A3		



Client: SEAVIEW PROPERTY DEVELOPMENTS LTD NEWRY

**Project:** Proposed Industrial Units  
Enterprise Way, Whitby

**Title:** Photographic Record - Viewpoint Locations

**Figure Number:** 12.3

## **APPENDICES**

---

**APPENDIX 3.1   CONSULTEE RESPONSE**

**Briege Trainor**

---

**From:** R.Charles [R.Charles@northyorkmoors-npa.gov.uk]  
**Sent:** 25 October 2006 13:04  
**To:** Briege Trainor  
**Subject:** Scoping study for 13 industrial units, Enterprise Way Whitby

Dear Briege

Thank you for your letter of 10 October which I have circulated around my colleagues.

I am aware that badgers are in the vicinity, but hold no other useful ecological information about the area. Mike Moore from the local badger group may be able to provide more details.

Our only other comment at this stage is that Graham Lee, Senior Archaeological Conservation Officer asks what archaeological evaluation/mitigation is proposed. His e-mail address is g.lee@northyorkmoors-npa.gov.uk.

I hope the above proves useful.

Rona Charles  
Ecologist

Conservation Department  
North York Moors National Park Authority  
The Old Vicarage, Bondgate  
Helmsley, York YO62 5BP UK

Tel: 01439 770657 Fax: 01439 770691  
r.charles@northyorkmoors-npa.gov.uk

WWW: <http://www.moors.uk.net>

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**Briege Trainor**

---

**From:** G.Lee [g.lee@northyorkmoors-npa.gov.uk]  
**Sent:** 13 November 2006 13:28  
**To:** Briege Trainor  
**Subject:** RE: Proposed Industrial units at Enterprise Way, Whitby

Dear Briege - Thank you for your recent e-mail regarding the above. I would be interested to learn what archaeological assessment and/or evaluation will be carried out as part of the above EIA.  
Regards

Graham Lee  
Senior Archaeological Conservation Officer

North York Moors National Park Authority  
The Old Vicarage  
Cottingham  
Helmsley  
YO62 5BP  
J.K.  
Tel: 01439 770657

---

**From:** Briege Trainor [mailto:TrainorB@rpsgroup.com]  
**Sent:** 09 November 2006 10:29  
**To:** G.Lee  
**Cc:** George Browne  
**Subject:** Proposed Industrial units at Enterprise Way, Whitby

Dear Graham

RPS Planning and Environment has been appointed by Seaview Property Developments to prepare an Environmental Impact Assessment for the above proposal which includes 13 Industrial Units ranging from 400m<sup>2</sup> to 575m<sup>2</sup>.

As part of the scoping exercise for the project, we are contacting both statutory and non-statutory consultees for any relevant feedback that may be deemed appropriate for inclusion or reference in our environmental assessment. The objectives of this exercise are:

- To canvas as wide a range of options as possible to ensure a comprehensive coverage of local issues and concerns;
- To collect data held by statutory and non-statutory consultees that may be relevant to the environmental assessment;
- To focus the assessment on key issues relevant to the site.

Rona Charles from the North York Moors National Planning Authority has provided me with your contact details. Furthermore, I would be grateful if you would reply to this e-mail outlining any area of concern to your organisation or any information you may hold that may be of use to the environmental impact assessment process. I have attached a copy of the Site Location plan and the detailed drawings. If you have any trouble opening them, can you let me know and I will forward a hard copy in the post.

Kind regards  
Briege

Briege Trainor BSc (Hons) MSc - Planner

RPS Planning & Environment, Citigate House, 157-159 High Street, HOLYWOOD, Co Down, BT18 9HU

13/11/2006

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**George Browne**

---

**From:** Nick Veale  
**Sent:** 09 November 2006 09:43  
**To:** R.Charles@northyorkmoors-npa.gov.uk  
**Cc:** Briege Trainor; George Browne  
**Subject:** RE: Scoping study for 13 industrial units, Enterprise Way Whitby

Dear Rona,

I am the project ecologist working on the Enterprise way scoping study in Whitby.

Having conducted the ecological survey on the 6th November, we found no evidence of any protected mammal species within a 250m buffer zone around the field in question.

I would like to make contact with Mike Moore from the local badger group just to make him aware that we have carried out a full mammal survey and have found no evidence.

Would it be possible to get Mike's email address for this purpose?

Kind Regards

Nick

**Nick Veale - Consultant Ecologist BSc (Hons) MSc**

**RPS Planning & Environment , Citigate House, 157-159 High Street, HOLYWOOD, Co Down, BT18 9HU**

☎ 028 9039 3969 ☎ 07970225216 ☎ 028 9039 3960 ✉ vealen@rpsgroup.com 🌐 www.rpsgroup.com

---

**From:** R.Charles [mailto:R.Charles@northyorkmoors-npa.gov.uk]  
**Sent:** 25 October 2006 13:04  
**To:** Briege Trainor  
**Subject:** Scoping study for 13 industrial units, Enterprise Way Whitby

Dear Briege

Thank you for your letter of 10 October which I have circulated around my colleagues.

I am aware that badgers are in the vicinity, but hold no other useful ecological information about the area. Mike Moore from the local badger group may be able to provide more details.

Our only other comment at this stage is that Graham Lee, Senior Archaeological Conservation Officer asks what archaeological evaluation/mitigation is proposed. His e-mail address is g.lee@northyorkmoors-npa.gov.uk.

I hope the above proves useful.

09/11/2006



Rona Charles  
Ecologist

Conservation Department  
North York Moors National Park Authority  
The Old Vicarage, Bondgate  
Helmsley, York YO62 5BP UK

Tel: 01439 770657 Fax: 01439 770691  
r.charles@northyorkmoors-npa.gov.uk

WWW: <http://www.moors.uk.net>

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# NORTH YORK MOORS NATIONAL PARK AUTHORITY

*A member of the Association of National Park Authorities*  
The Old Vicarage, Bondgate, Helmsley, York. YO62 5BP  
Tel: 01439 770657 e-mail: general@northyorkmoors-npa.gov.uk  
Fax: 01439 770691 www.moors.uk.net



**Andy Wilson**  
Chief Executive (National Park Officer)

RPS Planning & Environment  
Citigate House  
157-159 High Street  
Holywood  
County Down  
BT18 9HU

Your ref:  
Our ref:  
Date: 11 October 2006

This matter is being dealt with by: Mr Mark Hill

Dear Sir/Madam

**Re: Scoping Study for 13 Industrial Units at Enterprise Way, Whitby**

Thank you for your letter regarding the above, received today.

Many enquiries require us to either research the matter or undertake a site visit.

We will endeavour to provide you with a full response to your letter within 10 working days.

In the meantime if you have any queries regarding the progress on responding to your letter please telephone this office at the above number. If the officer dealing with it is unavailable our planning administration staff would be pleased to assist you.

Yours sincerely

Mrs J Cavanagh  
Planning Administration Officer

RPS BELFAST IRELAND RECEIVED 16 OCT 2006	
CIRC	ACTION



CUSTOMER SERVICE EXCELLENCE

Your ref: NI 0898/BT

Our ref:

Contact: Neil Linfoot

Direct Line: 01609 532470

**Transport and Land Use Strategy**

Highways North Yorkshire  
 County Hall, Northallerton  
 North Yorkshire DL7 8AH  
 Tel: 01609 780780  
 Fax: 01609 779838  
 E-mail: [neil.linfoot@northyorks.gov.uk](mailto:neil.linfoot@northyorks.gov.uk)  
[www.northyorks.gov.uk](http://www.northyorks.gov.uk)

03 November 2006

Dear Briega,

**Scoping Study for 13 Industrial Units at Enterprise Way, Whitby**

Thank you for your letter requesting comments on the proposed Environmental Impact Assessment for the above proposal.

As part of the submission I would like to see a Transport Assessment including the current traffic figures, figures for the year of opening and for the design year horizon. As identified in the 'Transport and Developments, A Guide' 2003 the design year horizon is opening year plus 15 years. This would identify any traffic problems that would arise from the construction of the development. The assessment should cover the junction of Enterprise Way with the A171.

Highway Improvements should also be identified as part of any submission, eg. Improvements / extensions to footway, footway links to / from the site, any junction improvements and also any improvements to the passenger transport infrastructure.

Traffic Count information can be obtained from the County Council, should you require this information please contact Frances Bainbridge, Data Collection Officer, 01609 532408.

Should you wish to discuss this matter further please contact me on the above number

Yours sincerely



Neil Linfoot  
 Senior Transport and Development Engineer

RPS Planning & Environment  
 Citigate House  
 157 - 159 High Street  
 Holywood  
 County Down  
 Northern Ireland  
 BT18 9HU



INVESTOR IN PEOPLE

keep north yorkshire moving

RPS BELFAST IRELAND RECEIVED 06 NOV 2006	
CIRC	ACTION
BT	NI0898



North

Yorkshire County Council

Business and Environmental Services

Your ref: NI 0898/BT

Our ref:

Contact: Les Parker  
[les.parker@northyorks.gov.uk](mailto:les.parker@northyorks.gov.uk)

Nick West B.Tech., C.Eng., M.I.C.E.  
Area Manager  
Highways North Yorkshire  
Area 3 – Whitby Office  
The Garth, White Leys Estate  
Whitby, YO21 3PD  
Tel: 0845 3669 503  
Fax: 01947 820314  
e-mail: [area3.whitby@northyorks.gov.uk](mailto:area3.whitby@northyorks.gov.uk)  
[www.northyorks.gov.uk](http://www.northyorks.gov.uk)

Briege Trainor  
RPS Planning & Environment  
Citigate House  
157-159 High Street  
Holywood  
County Down BT18 9HU

12 October 2006

Dear Ms Trainor

**Re: Scoping Study 13 Industrial Units at Enterprise Way, Whitby.**

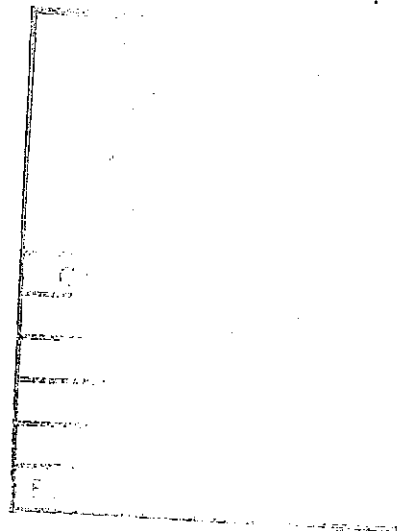
Further to your letter dated 10<sup>th</sup> October, the paperwork for this matter has been forwarded to County Hall as it is a major application.

The person who will be dealing with the application is Mr Neil Linfoot at the following address: North Yorkshire County Council, County Hall, Northallerton, North Yorkshire, DL7 8AH. Telephone : 01609 780780.

Yours sincerely

Les Parker  
Improvement Manager  
Area 3 Whitby Office

Lp/js



INVESTOR IN PEOPLE **keep north yorkshire moving**



North

Yorkshire County Council

Business and Environmental Services

Your ref: NI 0898/BT

Our ref:

Contact: Neil Linfoot

Direct Line: 01609 532470

**Transport and Land Use Strategy**

Highways North Yorkshire  
County Hall, Northallerton  
North Yorkshire DL7 8AH  
Tel: 01609 780780  
Fax: 01609 779838  
E-mail: [neil.linfoot@northyorks.gov.uk](mailto:neil.linfoot@northyorks.gov.uk)  
[www.northyorks.gov.uk](http://www.northyorks.gov.uk)

03 November 2006

Dear Briega,

**Scoping Study for 13 Industrial Units at Enterprise Way, Whitby**

Thank you for your letter requesting comments on the proposed Environmental Impact Assessment for the above proposal.

As part of the submission I would like to see a Transport Assessment including the current traffic figures, figures for the year of opening and for the design year horizon. As identified in the 'Transport and Developments, A Guide' 2003 the design year horizon is opening year plus 15 years. This would identify any traffic problems that would arise from the construction of the development. The assessment should cover the junction of Enterprise Way with the A171.

Highway Improvements should also be identified as part of any submission, eg. Improvements / extensions to footway, footway links to / from the site, any junction improvements and also any improvements to the passenger transport infrastructure.

Traffic Count information can be obtained from the County Council, should you require this information please contact Frances Bainbridge, Data Collection Officer, 01609 532408.

Should you wish to discuss this matter further please contact me on the above number

Yours sincerely

Neil Linfoot  
Senior Transport and Development Engineer

RPS Planning & Environment  
Citigate House  
157 - 159 High Street  
Holywood  
County Down  
Northern Ireland  
BT18 9HU



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RPS BELFAST IRELAND RECEIVED 08 NOV 2006	
ACTION	
BT	N10898

## APPENDIX 6.1 DRAINAGE CONSULTATION



RPS Consulting Engineers, Elmwood House, 74 Boucher Road, Belfast BT12 6RZ, Northern Ireland  
 T +44 (0)18 9066 7914 F +44 (0)28 9066 8286 E ireland@rpsgroup.com W www.rpsgroup.com/ireland



Our Ref IBW0159/D

7<sup>th</sup> March 2007

Yorkshire Water  
 Waste Water – Sewerage  
 New Development Team  
 Knostrop WWTW  
 Knowsthorpe Lane  
 LEEDS  
 LS9 0PJ

Dear Sir

**PROPOSED LIGHT INDUSTRIAL DEVELOPMENT  
 SITE OFF ENTERPRISE WAY, WHITBY**

We are retained as Consultants by our Client to provide input into an Environmental Statement which will accompany the Planning Application for the aforementioned development. The proposed development site is located adjacent to the existing Whitby Business Park as shown on the enclosed location map.

We wish to establish if the existing public sewer system is capable of accepting the foul sewage discharge from the proposed development. It is anticipated that there will be up to 200 employees when the units are fully taken up with allowance for 60 visitors. The foul sewage discharge will originate from toilets and wash hand basins.

We have calculated the total foul sewage discharge from the development as set out in the following table.

Description	Number of people	Per capita load (l/h/d)	Daily Load (m3/day)	Average Rate of Discharge over 8hr working day (litres/sec)
Employees / Staff	200	50	10.0	0.35
Visitors	60	25	1.5	0.05
<b>TOTAL</b>			<b>11.5</b>	<b>0.40</b>

Tenants for the proposed units are currently being identified and although it is anticipated that all foul discharges will be domestic effluent we would want to make some provision for a trade discharge from the development should this specific need arise with an interested tenant or purchaser. Accordingly we would wish to be advised of any available capacity within the public sewer system for such a discharge in terms of flow capacity and any discharge standard which would be imposed in such circumstances.

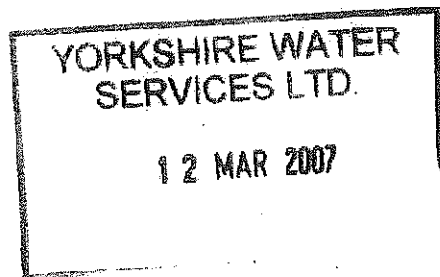
We trust the information provided above together with the enclosed location map is sufficient to enable you to undertake your assessment.

Can you also advise on the location of the nearest available connection point for our foul discharge and the extent of the works which will be required to achieve a connection to the public sewer system.

If you require any further information or wish to discuss any of the above please do not hesitate to contact the undersigned.

Yours faithfully  
 for RPS Consulting Engineers

**Kieran Dillon**  
 Chartered Engineer  
 Associate



Dublin | Belfast | Cork | Galway | Limerick | Carlow | Letterkenny

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 RPS Consulting Engineers (formerly Kirk McClure Morton and M.C. O'Sullivan & Co. Ltd.)  
 Registered in Northern Ireland No NI20604.

Consulting Engineers

COPY OF EMAIL CORRESPONDENCE RECEIVED FROM ENVIRONMENT AGENCY

From: Gary Cutter [mailto:gary.cutter@environment-agency.gov.uk]  
Sent: 28 March 2007 13:32  
To: Kieran Dillon  
Subject: Re: Proposed Development at Whitby

Kieran

Further to our meeting this morning I can confirm that the proposals in your email are acceptable to the EA from a flood risk management viewpoint. When finalising the design the calcs should take account of the new guidance regarding climate change allowances detailed in PPS25, based on the design life of the development. Recent EA guidance is that for non-residential development this should be taken as 60 years.

If possible the attenuation system should be designed to mimic existing greenfield run-off, ie increasing with storm intensity.

Let me know if you need any more info.

regards

Gary Cutter  
Development Control Engineer  
Environment Agency

Gary.Cutter@environment-agency.gov.uk

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We have checked this email and its attachments for viruses. But you should still check any attachment before opening it.

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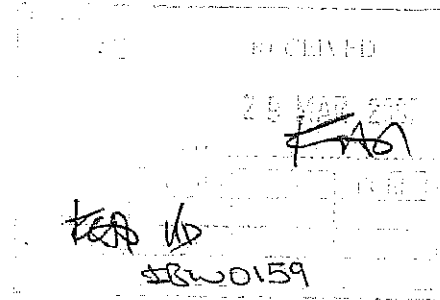
If we have sent you information and you wish to use it please read our terms and conditions which you can get by calling us on 08708 506 506. Find out more about the Environment Agency at [www.environment-agency.gov.uk](http://www.environment-agency.gov.uk)



RPS Consulting  
Elmwood House  
74 Boucher Road  
Belfast  
BT12 6RZ  
Northern Ireland

FAO Kieran Dillon

Your Ref:  
Our Ref: H002852



Yorkshire Water  
Waste Water - Sewerage  
New Development Team  
Knostrop WWTW  
Knowsthorpe Lane  
LEEDS  
LS9 0PJ

Tel: (0113) 235 4138  
Fax: (01274) 372 834

Email:  
Planning.Sewerage@yorkshirewater.co.uk

For telephone enquiries ring:

Kashif Khan on (0113) 235 4138

28th March 2007

Dear Sir/Madam,

**Site off Enterprise Way, Whitby - Pre-Planning Sewerage Enquiry-Industrial Development**

Thank you for your letter of 7th March 2007 and remittance. Please find enclosed our official VAT receipt number 007431 together with a complimentary extract from the Statutory Sewer Map. This indicates the recorded position of the public sewers. The following comments reflect our view, with regard to the public sewer network only, based on a 'desk top' study of the site:

Development of the site should take place with separate systems for foul and surface water drainage. The separate system should extend to the public sewer.

Foul water should discharge to the 150 mm diameter public foul sewer recorded in Fairfield Way, at a point approximately 70 metres from the site. Foul water from kitchens and/or food preparation areas of any restaurants and/or canteens etc. must pass through a fat and grease trap of adequate design before any discharge to the public sewer network.

The developer's attention is drawn to Requirement H3 of the Building Regulations 2000. This establishes a preferred hierarchy for surface water disposal. Consideration should firstly be given to discharge to soakaway, infiltration system and watercourse in that priority order.

Sustainable Drainage Systems (SUDS), for example the use of soakaways and/or permeable hardstanding etc., may be a suitable solution for surface water disposal appropriate in this situation. You are advised to seek comments on the suitability of SUDS in this instance from the appropriate authorities.

Where appropriate, soakaways, swales and infiltration trenches (SUDS) may be adopted as part of the public sewer network. For general conditions for the adoption of SUDS please see the attached sheet. Further information may be seen in the DEFRA publication 'Interim Code of Practice for Sustainable Drainage Systems' (ISBN 0-86017-904-4). If the developer is considering adoption of SUDS he should contact our New Development Team at Sheffield on 0845 124 24 29.

The local public sewer network does not have capacity to accept any discharge of surface water from the proposal site. The developer is advised to contact the Environment Agency/local



Land Drainage Authority with a view to establishing a suitable watercourse for discharge.

It is understood that a culverted watercourse is located to the north-west of the site. This appears to be the obvious place for surface water disposal.

An off-site foul surface water sewer may be required which may be provided by the developer and considered for adoption under Section 104 of the Water Industry Act 1991. Please telephone 0845 124 24 29 for advice on sewer adoptions. Alternatively, the developer may in certain circumstances be able to requisition off-site sewers under Section 98 of the Water Industry Act 1991 for which an application must be made in writing. For further information, please telephone 0845 124 24 29.

Prospectively adoptable sewers must be designed and constructed in accordance with the WRc publication "Sewers for Adoption - a design and construction guide for developers" 6th Edition as supplemented by Yorkshire Water's requirements, pursuant to an agreement under Section 104 of the Water Industry Act 1991. An application to enter into a Section 104 agreement must be made in writing prior to any works commencing on site. Please contact our New Development Team at Sheffield (telephone 0845 124 24 29) for further information.

The public sewer network is for domestic sewage purposes. This generally means foul water for domestic purposes and, where a suitable surface water or combined sewer is available, surface water from the roofs of buildings together with surface water from paved areas of land appurtenant to those buildings. Land and highway drainage have no right of connection to the public sewer network. Land drainage will not be allowed into a public sewer. Highway drainage, however, may be accepted under certain circumstances; for instance, if SUDS are not a viable option and there is no highway drain available and if capacity is available within the public sewer network. In this event, the developer will be required to enter into a formal agreement with Yorkshire Water Services under Section 115 Water Industry Act 1991 to discharge non-domestic flows into the public sewer network.

Any new connection to an existing public sewer will require the approval of Yorkshire Water. You may obtain an application form by telephoning 0845 124 24 29.

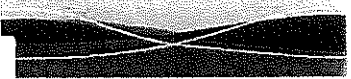
Yorkshire Water's Industrial Waste Manager must be consulted in respect of any proposed trade effluent discharge to the public sewer.

All the above comments are based upon the information and records available at the present time. The information contained in this letter together with that shown on any extract from the Statutory Sewer Map that may be enclosed is believed to be correct and is supplied in good faith. Please note that capacity in the public sewer network is not reserved for specific future development. It is used up on a 'first come, first served' basis. You should visit the site and establish the line and level of any public sewers affecting your proposals before the commencement of any design work.

Yours faithfully



New Development Team



YorkshireWater

Yorkshire Water  
Waste Water - Sewerage  
New Development Team  
Knostrop WWTW  
Knowsthorpe Lane  
LEEDS  
LS9 0PJ

RPS Consulting  
Elmwood House  
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Tel: (0113) 235 4138  
Fax: (01274) 372 834

FAO Kieran Dillon

Email:  
Planning.Sewerage@yorkshirewater.co.uk  
For telephone enquiries ring:

Your Ref:

Kashif Khan on (0113) 235 4138

Our Ref: H002852

3rd April 2007

Dear Sir/Madam,

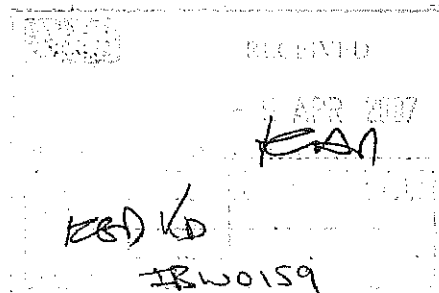
Site off Enterprise Way, Whitby - Pre-Planning Sewerage Enquiry-Industrial Development

In reply to your e-mail dated 30th March 2007, I would like to confirm the following:

- Foul water should discharge to the 150 mm diameter public foul sewer recorded in Fairfield Way, at a point approximately 70 metres from the site. I can verify that there is sufficient capacity available in the public sewer network to accept foul water domestic flows from the proposed development.
- The developer is required to consult with Yorkshire Water's Industrial Waste Section (telephone 0845 1242429) on any proposal to discharge a trade effluent to the public sewer network.
- There is believed to be a culverted watercourse to the north-west of the site. You may wish to consult with the Environment Agency for any further details.

Yours faithfully

New Development Team



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**APPENDIX 7.1 EVALUATION OF ECOLOGICAL IMPORTANCE AND  
ASSESSMENT OF IMPACT SIGNIFICANCE**

## Introduction

While the IEEM *Guidelines* (IEEM 2002 *et seq.*) provide a terminology for describing impact significance and ecological evaluation for ecological assessments, the application of criteria therein is not yet standardised. RPS (1998) devised criteria and terminology to identify ecological impact significance. The following terminology is used to describe impact significance in this ecology report.

The impact significance is a combined function of the value of the affected feature (its ecological importance), the type of impact and the magnitude of the impact.

## Evaluation of Ecological Importance

**Table 1** Criteria for assessing ecological importance

Importance	Criteria
International	Sites which qualify for designation as SACs or SPAs
National <sup>1</sup>	Sites which qualify for designation as ASSIs or NHAs Sites which hold Red Data Book (Curtis and McGough, 1988) plant species Sites which hold nationally rare invertebrate species, subject to an evaluation as to whether their known status may be largely due to under-recording Sites which hold nationally rare vertebrate species (as defined by Whilde, 1993) Sites which hold nationally important bird populations (defined as 1% of the national population; Sheppard, 1993)
Regional	Sites which hold nationally scarce plant species (recorded from less than 65 10 km squares <sup>2</sup> ), unless they are locally abundant Sites which hold nationally scarce invertebrate species (recorded from less than 65 10 km squares <sup>2</sup> ), unless they are locally abundant and subject to an evaluation as to whether their known status may be largely due to under-recording Sites which hold regionally scarce vertebrate species Sites which hold semi-natural habitats likely to be of rare occurrence within the county Sites which hold the best examples of a semi-natural habitat type within the county
High Importance	Local Sites which hold semi-natural habitats and/or species likely to be of rare occurrence within the local area Sites which hold the best examples of a high quality semi-natural habitat type within the local area
Local Importance	Sites which hold high quality semi-natural habitats
Local Value	Any semi-natural habitat

<sup>1</sup> the island of Ireland.

<sup>2</sup> based pro-rata on the British criteria of 100 10 km squares (JNCC, 1995).

There is no systematic evaluation of ecological importance below a national scale apart from national trunk road schemes. Even for sites of national importance (i.e. ASSIs or NHAs), there are no formal criteria available for their evaluation. The criteria shown in Table 2 have been developed by RPS Group. This is based on an international-national-regional-local scale. The local scale is approximately equivalent to one 10 km square but can be operationally defined to reflect the character of the area of interest. For example, for riparian features it could be a section of a river catchment. Because most sites will fall within the local scale, this is sub-divided into high local importance-local importance-local value.

## Assessment of Impact Type and Magnitude

Criteria for assessing impact type and magnitude are presented in Table 2 and Table 3 respectively.

**Table 2 Criteria for assessing impact type**

Impact type	Criteria
Positive impact:	A change to the ecology of the affected feature which improves its conservation status.
Negative impact:	A change to the ecology of the affected feature which reduces its conservation status.

**Table 3 Criteria for assessing impact magnitude**

Impact magnitude	Definition
No change:	No discernible change in the ecology of the affected feature.
Imperceptible Impact:	A change in the ecology of the affected site, the consequences of which are strictly limited to within the development boundaries.
Slight Impact:	A change in the ecology of the affected site which has noticeable ecological consequences outside the development boundary, but these consequences are not considered to significantly affect the distribution and/or abundance of species or habitats of conservation importance <sup>1</sup> .
Moderate Impact:	A change in the ecology of the affected site which has noticeable ecological consequences outside the development boundary. These consequences are considered to significantly affect the distribution and/or abundance of species or habitats of conservation importance.
Substantial Impact:	A change in the ecology of the affected site which has noticeable ecological consequences outside the development boundary. These consequences are considered to significantly affect species or habitats of high conservation importance and to potentially affect the overall viability of those species or habitats in the wider area <sup>2</sup> .
Profound Impact:	A change in the ecology of the affected site which has noticeable ecological consequences outside the development boundary. These consequences are considered to be such that the overall viability of species or habitats of high conservation importance in the wider area <sup>2</sup> is under a very high degree of threat (negative impact) or is likely to increase markedly (positive impact).

<sup>1</sup> It is not possible to define specific numerical thresholds, as different species/habitat have varying degrees of resilience to ecological perturbation.

<sup>2</sup> i.e., the area relevant to the assessed importance of the feature.

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**APPENDIX 10.1 AIR QUALITY OBJECTIVES**

## Introduction

**Table 1.1: Objectives included in the Air Quality Regulations 2000 and (Amendment) Regulations 2002 for the purpose of Local Air Quality Management**

Pollutant	Air Quality Objective		Date to be achieved by
	Concentration	Measured as	
<b>Benzene</b>			
All authorities	16.25 µg/m <sup>3</sup>	running annual mean	31.12.2003
Authorities in England and Wales only	5.00 µg/m <sup>3</sup>	annual mean	31.12.2010
Authorities in Scotland and Northern Ireland only <sup>a</sup>	3.25 µg/m <sup>3</sup>	running annual mean	31.12.2010
<b>1,3-butadiene</b>	2.25 µg/m <sup>3</sup>	running annual mean	31.12.2003
<b>Carbon monoxide</b>			
Authorities in England, Wales and Northern Ireland only <sup>a</sup>	10.0 mg/m <sup>3</sup>	maximum daily running 8-hour mean	31.12.2003
Authorities in Scotland only	10.0 mg/m <sup>3</sup>	running 8-hour mean <sup>b</sup>	31.12.2003
<b>Lead</b>	0.5 µg/m <sup>3</sup>	annual mean	31.12.2004
	0.25 µg/m <sup>3</sup>	annual mean	31.12.2008
<b>Nitrogen dioxide<sup>c</sup></b>	200 µg/m <sup>3</sup> not to be exceeded more than 18 times a year	1-hour mean	31.12.2005
	40 µg/m <sup>3</sup>	annual mean	31.12.2005
<b>Particles (PM<sub>10</sub>) (gravimetric)<sup>d</sup></b>	50 µg/m <sup>3</sup> not to be exceeded more than 35 times a year	24-hour mean	31.12.2004
All authorities	40 µg/m <sup>3</sup>	annual mean	31.12.2004
Authorities in Scotland only <sup>e</sup>	50 µg/m <sup>3</sup> not to be exceeded more than 7 times a year	24-hour mean	31.12.2010
	18 µg/m <sup>3</sup>	annual mean	31.12.2010
<b>Sulphur dioxide</b>	350 µg/m <sup>3</sup> not to be exceeded more than 24 times a year	1-hour mean	31.12.2004
	125 µg/m <sup>3</sup> not to be exceeded more than 3 times a year	24-hour mean	31.12.2004
	266 µg/m <sup>3</sup> not to be exceeded more than 35 times a year	15-minute mean	31.12.2005

<sup>a</sup> In Northern Ireland none of the objectives are currently in regulation. Air Quality (Northern Ireland) Regulations are scheduled for consultation early in 2003.

<sup>b</sup> The Air Quality Objective in Scotland has been defined in Regulations as the running 8-hour mean, in practice this is equivalent to the maximum daily running 8-hour mean.

<sup>c</sup> The objectives for nitrogen dioxide are provisional.

<sup>d</sup> Measured using the European gravimetric transfer sampler or equivalent.

<sup>e</sup> These 2010 Air Quality Objectives for PM<sub>10</sub> apply in Scotland only, as set out in the Air Quality (Scotland) Amendment Regulations 2002.



## APPENDIX 10.2 CONSULTATION



# The Airshed

Environmental Regulation Team  
Environmental Health Services  
Scarborough Borough Council  
Town Hall  
St Nicholas Street  
Scarborough  
YO11 2HG

By email: [ehs@scarborough.gov.uk](mailto:ehs@scarborough.gov.uk)

Dear Sirs

## **Planning Application Enterprise Way Whitby Air Quality Assessment**

I refer to the attached plan which shows the proposed extension to the industrial estate at Enterprise Way, Whitby. The proposed development shall increase the local traffic on the A717 and it is proposed to assess the potential air quality impacts on local sensitive receptors in accordance with the method set out in the Design Manual for Roads and Bridges.<sup>1</sup>

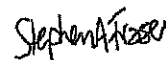
I propose to use the baseline air quality estimates published by NETCEN. I'd be grateful if you could confirm that this will be acceptable. The pollutants will be predicted in accordance with the technical requirements of RATG.<sup>2</sup>

Local PM<sub>10</sub> and NO<sub>2</sub> concentrations shall be predicted for the year 2010 and 2023, based on the available traffic projections and assessed in accordance with the relevant Air Quality Objectives. I'd also be grateful if you could also provide me with a copy of the most recent review and assessment to confirm if there are any new AQMAs proposed in the vicinity of the development.

At present there are no specific uses envisaged for the new industrial units so that it would not be practical to consider the air quality impacts from the potential future industrial activities. Such future use would be most effectively determined in the light of any specific use.

I would greatly appreciate your comments on this approach and any additional requirements that the Council may have in addition to the methodology and standards specified above.

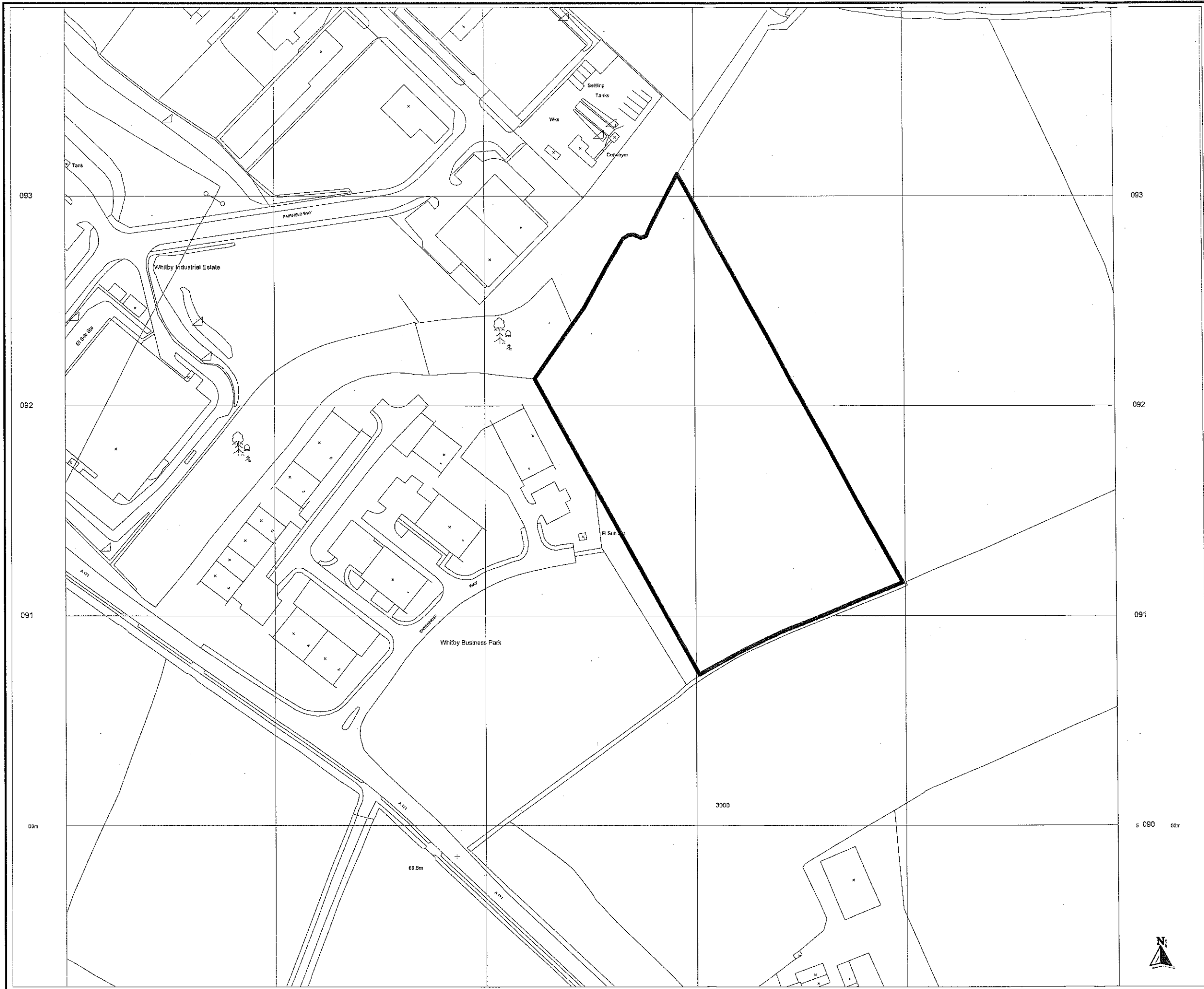
Kind regards



Steve Fraser BSc MPhil CEnv MIOA MCIWM

<sup>1</sup> Highways Agency November 2003. Version 1.02

<sup>2</sup> DEFRA 2003 Review and Assessment Technical Guidance LAQM TG(03)



**Notes**  
 1. This drawing is the property of RPS Planning & Environment. It is a confidential document and must not be copied, used, or its contents divulged without prior written consent.

**LEGEND**

— Proposed Site

**Issue Details**

Drawn: BT	<b>Proposed Industrial Units</b>	
Chkd: GB	<b>Enterprise Way, Whitby</b>	
Appd: RH		
Date: December 2006	Drawing No. 01	Rev. DRAFT Version 01
Scale: -		

Client: SEAVIEW PROPERTIES LTD  
 NEWRY

**Project: Proposed Industrial Units  
 Enterprise Way, Whitby**

**Title: Template**

**Figure Number: 1.0**

