

A64 Dualling Schemes York to Scarborough

Stage 1 Environmental Impact Assessment

Volume 1 - Impact Assessment

Final- March 2005

1 INTRODUCTION

1.1 The Commission

In June 2004, Capita Symonds was commissioned by The Highways Agency to undertake preparation work to consider the feasibility of improving the A64 from York to Scarborough to dual 2 lane carriageway standards.

The work required involves developing a robust cost estimate, carry out a Stage 1 Environmental Assessment and consult with statutory consultees during the process.

1.2 The Purpose of the Scheme

The purpose of this study is to review the existing and relevant information for the York to Scarborough section of A64 and determine if the two schemes identified by Steer Davis Gleave are sufficiently robust in terms of current highway economics and environmental standards and in the light of today's public expectations to achieve entry into the Targeted Programme of Improvements. The results of the study will be submitted to Ministers who will make the final decision.

1.3 The Purpose of the Environmental Impact Assessment

1.3.1 The Purpose of the Assessment

The following Environmental Impact Assessment studies the impacts relating to a broadly defined route corridor for dual carriageway between York and Scarborough. It has been carried out in accordance with the Design Manual for Roads and Bridges Volume 11 Environmental Assessment (DMRB Volume 11). Its aim is to identify the environmental advantages, disadvantages and constraints associated with a broadly defined route corridor(s) between York and Scarborough.

According to the Design Manual for Roads and Bridges Volume 11 Environmental Assessment, the purpose of this Stage 1 Environmental Impact Assessment (EIA) is to provide 'sufficient assessment to identify the environmental advantages, disadvantages and constraints associated with broadly defined route corridors.'

1.3.2 The Stages in Assessment of Road Schemes

DMRB assessment methodology follows a three-stage process. At Stage 1 the broad route corridor is studied to identify broad environmental constraints. At Stage 2 a comparative study of impacts relating to separate route options is made. Stage 3 consists of a detailed evaluation of the selected route. This report forms a Stage 1 EIA.

1.3.3 Legislative Framework for the Assessment

European and United Kingdom Legislation regarding Environmental Impact Assessment

European and UK environmental impact assessment legislation seeks to govern the type and scale of development projects which by law require Environmental Statements (ES), and the processes for carrying out ES. This Stage 1 EIA does not lead to the production of an ES; it is a preliminary study to identify potential environmental impacts within route corridors. The primary source of guidance for this work is contained within DMRB Volume 11.

However, European and UK EIA legislation has, where appropriate, been taken into account in this assessment. Key legislation and directives which have been taken into account are:

- EC Directive 85/337/EEC Assessment of the Effects of Certain Public and Private Projects on the Environment EEC 1987
- Council Directive 97/11/EC EEC 1997 which amends the above directive
- Statutory Instrument 1999 No 369 The Highways (Assessment of Environmental Effects) (England and Wales) Regulations 1999 which provides the statutory framework for EIA within the UK.

1.4 Limitations of Study

1.4.1 Design Information

The study has been carried out based on a level of design appropriate to a Stage 1 assessment. The exact location of vegetative drainage systems, compounds, haul routes etc. cannot accurately be determined at this stage. As a consequence, some assessments are limited by the level of design information available. Further studies would be required at Stage 2 and Stage 3 to determine exact impacts. This limitation is not thought to have prevented the objective of the Stage 1 from being achieved.

1.4.2 Other Limitations

If any other minor limitations to the assessment have been encountered, they are described within the relevant individual assessments.

1.5 Presentations of Findings: the structure of the report

1.5.1 Structure of Report

This Stage 1 Environmental Impact Assessment has been carried out in accordance with DMRB Volume 11. The information is presented in three volumes, namely:

Volume 1

This volume contains the introduction, detailed impact assessments on specific issues such as air quality, cultural heritage and ecology, and a summary of the key findings, drawing together the various issues. This volume is divided into three discrete sections:

- Section 1: Introduction.
- Section 2: Detailed assessments of individual issues.
- Section 3: Summaries from detailed assessments, and conclusions.

Volume 2

This volume contains the plans which illustrate base-line (existing) conditions, environmental impacts, constraints, and mitigation proposals.

Volume 3

Comprising all appendices which have been referred to in Volume 1.

To assist with navigation of the three volumes, the numbering system has been organised so that series numbers for specific environmental issues correspond throughout all three volumes. For example, Cultural Heritage forms chapter 4 of the detailed assessment section of Volume 1, and the related drawings and appendices are found within series 4 of Volumes 2 and 3.

1.5.2 Individual Assessment Procedure and Report Structure

For consistency, the individual assessments, while undertaken by separate specialists, have been reported following a standard procedure and format, as outlined below:

Introduction

This briefly describes the purpose of the assessment of the particular issue.

Assessment Techniques and Methodology

Here, the guidelines which have been used are listed and any references included. The methodology used in the assessment is outlined. This includes a description of baseline survey techniques, definitions of scales of impacts, the development of mitigation measures, the assessment process and any limitations or assumptions which have been made. The aim is to ensure 'transparency' in the assessment, and to enable readers to understand the rationale behind the assessments.

The Baseline Conditions

In this part, the existing conditions relevant to the issue being assessed are described. Findings from desktop and field surveys are included here, along with information on statutory designations and relevant legislation. (Strictly speaking the "baseline" means the situation which exists immediately before works start. However, in this project, where start of works is likely to be several years in the future, it is the currently existing conditions which are described.)

The Scheme Description

This describes the key design elements of the route corridors as they relate to the issue being studied.

Identification of Impacts

The key positive and negative impacts, which may be caused by the schemes, are outlined here. The magnitude and significance of impacts is not studied here; this is only carried out once mitigation has been taken into account.

Possible Mitigation Measures

In this part of the report, possible mitigation measures are listed. . These measures have not been presented to the Highways Agency for approval.

Impact Assessment

Here, the actual assessment is made, and impacts during both construction and operation are considered. The mitigation measures are only taken into account if they have a measurable effect.

Summary

In the summary, the advantages, disadvantages and constraints are identified. For transparency, any limitations to the study are listed. If further mitigation measures could be employed to further reduce negative impacts they are also listed here, though their effect is not taken into account in the assessment. Information from this summary is carried forward into the summary and conclusions to Volume 1.

1.6 The Study Area

The route corridor begins on the A64 at York and terminates at Seamer, near Scarborough. The A64 is a dual lane all purpose carriageway from its junction with the A1(M) to Hopgrove Roundabout at the north east of York. The road is single carriageway, throughout the remainder of its length with the exception of dual carriageway at Whitwell and Malton.

The A64 is an important link between West Yorkshire, the North Yorkshire Moors National Park and the east coast resorts. Its junction with the A1 to the south of Bramham provides a connection to the north and south of England. See plan 01.01.

1.7 Description of the Study Area

The study area runs in a north-easterly direction through the county of North Yorkshire and crosses the boundaries of the City of York District, Ryedale District and Scarborough Borough.

Predominately small settlements occupy part of the route corridors, with Malton the largest settlement, approximately half way between York and Scarborough. Malton is bypassed in the form of dual carriageway, and is therefore a convenient division of the study area.

1.8 Description of the Route Corridors

York to Malton. This section is a 1km study corridor around the A64 and passes through a rural landscape, at times close to the River Derwent.

Malton to Scarborough. This section consists of two, 1km corridors as identified in the Steer Davies Gleave Economic Impact Report, 2003. The first corridor, generally follows the line of the existing A64 (the On Line Route) and the second following the line of the 1992 public consultation route (The Off Line Route). This section runs through a rural landscape with small villages, and at times runs close to the York Railway Line.

2 SECTION 2 CONSULTATION

2.1 The Commission

Following the commission in June 2004, to undertake preparation work to consider the feasibility of improving the A64 from York to Scarborough to dual 2 lane carriageway standards, Capita Symonds commenced carrying out a Stage 1 Environmental Assessment. This includes consultation with statutory consultees during the process.

2.2 The Purpose of the Consultation

The purpose of the consultation is to seek information about any sensitive issues upon which the assessment should concentrate. Requests were made for up to date information about the site, including any designations and any relevant reports. Appendix 02.01 lists the statutory consultees, stakeholders and other consultees who were contacted. Appendix 02.02 lists those who replied.

Consultation also involved holding a number of meetings. Two meetings were held to clarify and confirm with the stakeholders the scheme brief, discuss the route corridor and the proposed routes.

A third meeting was held on 26 November 2004 in Leeds. This meeting took the form of an Environmental workshop facilitated by CVRL. The attendees included stakeholders and statutory consultees. The aim of the workshop was to provide an opportunity for:

- The Highways Agency and Capita Symonds to meet key stakeholders
- An exchange of information, to explain expectations, requirements and understand the constraints within the study area.
- The stakeholders to understand the risks that might pose a threat to the delivery of a dual carriageway between York and Scarborough.

A copy of the Workshop report and Executive Summary Report are in Appendix 02.03 & 02.04 respectively.

Information from all the forms of consultation were used, when appropriate, to inform the main study.

3 AIR QUALITY

3.1 Introduction

A new road scheme may change traffic flows in a locality in a number of ways, with corresponding impacts on air quality. The purpose of this assessment is to predict any changes in air quality levels likely to arise from the existing A64 York to Scarborough and the options proposed between Section One York Bypass to Malton Bypass and Section Two Malton Bypass to Seamer.

Road transport, which is a significant source of nitrogen dioxide (NO₂) and particulate matter (PM₁₀), is one of the major sources of local air pollution. Concentrations of these two pollutants are at risk of exceeding the Air Quality Strategy objectives near major roads so the Local Air Quality sub-objective focuses on these two pollutants.

The approach to assessing local air quality is based on a quantification of the change in exposure at properties in the opening year. This generalised appraisal method, to give PM₁₀ and NO₂ data, would be carried out at DMRB and TAG Stage 2. Air quality levels would also be checked at this stage for compliance with Air Quality Strategy objectives.

At Stage 1, the DMRB and Web TAG assessment is limited to identifying the number of properties in distance bands within 200m of the existing and planned routes, and estimating locations where changes in flow, speed and congestion are expected. Beyond 200m, the contribution of vehicle emissions from the road centre to local pollution levels is not significant. The Stage 1 assessment provides a qualitative input to the TAG worksheet, but not the remaining (quantitative) data for PM₁₀ and NO₂.

However, in order to estimate changes in air quality between the options (which includes on-line widening), a simplified assessment has been undertaken in addition to identifying the number of properties in distance bands.

3.2 Assessment Techniques and Methodology

3.2.1 Guidelines

The Guidelines used in this assessment are detailed in DMRB Volume 11 Environmental Assessment, Section 3, Part 1 Air Quality, February 2003 and the Web Tag assessment.

The assessment is made with reference to air quality standards. The standards operable in the UK are those specified in the European Union Directives and the UK Air Quality Strategy (AQS). The Strategy includes five pollutants associated with traffic and limits have been set for emissions not to be exceeded by particular compliance dates. These pollutants and their emission objectives, relevant to the scheme opening year, are outlined in the table below.

Pollutant	Objective	Compliance Date
Nitrogen Dioxide (NO ₂)	Annual mean concentration should not exceed 40ug/m ³	31 December 2005
Particulate Matter expressed as PM ₁₀	24-hour mean concentration should not exceed 50ug/m ³ more than 7 times a year. Annual mean concentration should not exceed 20ug/m ³	31 December 2010
Benzene	Annual mean concentration should not exceed 5ug/m ³	31 December 2010
1, 3-butadiene	Running annual mean concentration should not exceed 2.25ug/m ³	31 December 2003
Carbon Monoxide (CO)	Running 8-hour concentration should not exceed 10mg/m ³	31 December 2003

Table 1 UK Air Quality Strategy Objectives for local air quality management

3.2.2 References

Reference was also made to internet sites for:

- estimated UK background air pollution concentrations for year 2001 and projections for other years (LAQM tools on airquality.co.uk website)
- Web Tag.
- DMRB Air Quality Spreadsheet (Highways Agency website)

3.2.3 Methodology

Baseline Survey

Properties within 200 metres of the A64 and each option have been identified as the most significant receptors affected by any change in air quality. These properties have been used to assess the impact on local air quality for each proposal. Beyond 200m, the contribution of vehicle emissions to local pollution levels is not generally considered significant.

The local impact assessment is intended primarily to determine the likelihood of pollution concentrations arising that might be harmful to human health. The pollutants also contribute to a more widespread (regional) deterioration of air quality assessed in a DMRB Stage 3 Environmental Assessment.

Estimates of pollutant concentrations were calculated using the ‘Local’ application of the DMRB spreadsheet with years 2014 assessed as the base year and scheme opening year. Background concentrations were determined from UK background air pollution concentrations, projected for the relevant years. The distance to each property banding, traffic data and speeds along each link were also input onto the spreadsheet to predict pollution concentrations at each receptor.

In addition to estimating pollution concentrations at properties, an estimate of the overall change in people’s exposure to concentrations of nitrogen dioxide (NO₂) and particulate matter (PM₁₀) for the scheme opening year has also been made. This involves calculating the difference in roadside levels of these two pollutants between the ‘do-nothing’ and ‘with proposal’ scenarios and their diminishing effects up to 200m from each proposal.

Definition of Scales of Impact

Assessment results for each option are compared. Options with predicted emission levels lower than the 'do-nothing' scenario are considered to be an improvement and those with emission levels greater than the 'do-nothing' scenario are considered as generating a reduction in air quality.

However, a proposal can have both positive and negative effects on air quality as some receptors within a proposal may benefit in terms of an improvement in air quality while others may experience a reduction in air quality. In order to quantify the overall effects of a proposal, the change in people's exposure to concentrations of nitrogen dioxide (NO₂) and particulate matter (PM₁₀) and their diminishing effects are used to gauge the scheme as a whole.

Air Quality would be considered as having a significant negative impact where UK Air Quality Strategy Objectives detailed in Table 1 (under 2.1 Guidelines) are exceeded.

Development of Possible Mitigation Measures

Due to the airborne nature of traffic emissions, physical barriers, such as dense vegetation screens, provide only a slight reduction in pollution levels on the leeward side of large screens. Mitigation, therefore, can only be incorporated in a scheme at the design stage by ensuring that a minimum number of properties are located within 200m of the proposals and that traffic is free flowing at moderate speeds, particularly at sensitive locations.

Assessment of Impacts

Calculations of predicted emission levels have been carried out and comparisons of options have been made to assess the levels of impact (see definition of scales).

Limitations to Surveys or Assessments

Other than the limitations inherent in the air quality calculations described in DMRB Volume 11 Section 3: Part 1 Air Quality, no other limitations were encountered during the assessment.

Assumptions in the Assessment

Rural background concentrations at individual O.S. grid squares containing road links may be unduly influenced by the presence of road traffic. Normally, therefore, it is inappropriate to add a second contribution from road traffic during the calculation process. So an average background concentration, up to four grid squares away from either side of the road, is usually used to derive the average background concentrations in rural locations.

However, as background emissions vary only slightly between O.S. grid references in this area, an average between the relevant O.S. grid square and one adjacent square, not influenced by the A64, has been used to determine background concentrations at relevant receptors.

The national speed limit has been used as the default speed on the proposed links as no information is currently available for projected average speeds. Future traffic growth was calculated assuming National Road Traffic Forecast predictions and the composition of traffic was assumed to be the same as the present proportions on the existing A64.

3.3 The Base Line Conditions of Section 1

The Base Line Conditions Section 1 from York Bypass (at A1237 Hopgrove junction) to Malton Bypass (at B1248 Musley Bank Junction)

Within the scope of the study area, the A64 can be identified as the main traffic route that is responsible for the existing air quality along the proposed corridor. Country roads will also have an effect on air quality but to a much lesser extent.

The small villages of Crambeck and Whitwell-on-the-Hill are located within close proximity of the A64 as well as numerous farmhouses and residential properties that can be located along this length of the A64.

Recreational areas that might be particularly sensitive to traffic air borne pollutants can be identified as a race course to the south of Whitwell-on-the-Hill and a tennis court in Crambeck. These sensitive locations identified are all within 200m from the existing route network.

3.3.1 Property Banding

A count of the properties within 50m distance bands from the existing routes is summarised in table 2 below.

Distance Band from A64	Number of Properties
0-50m	31
50-100m	58
100-150m	41
150-200m	34
Total	164

Table 2 – A64 York Bypass to Malton Bypass “Do Nothing” Property Bandings

3.3.2 The Legislative Framework Section 1 from York Bypass (at A1237 Hopgrove junction) to Malton Bypass (at B1248 Musley Bank Junction)

The air quality standards operable in the UK are those specified in the European Union Directives and in the UK Air Quality Strategy (AQS), Air Quality Strategy – Addendum, The Air Quality (England) Regulations 2000 and The Air Quality (England) (Amendment) Regulations 2002.

Air quality standards in the EU were first established in the 1980s and Directives were issued to control smoke and sulphur dioxide (80/779/EEC), lead (82/884/EEC), nitrogen dioxide (85/203/EEC) and ozone (92/72/EEC). Subsequently, Directive 96/62/EEC introduced a framework for ambient air quality management in the EU. This Directive does not itself contain any specific air quality standards, but establishes the air pollution management and monitoring framework within which standards will apply: the standards themselves are published in a series of pollutant-specific ‘Daughter Directives’. The framework directive was transposed in England by the Air Quality Limit Values Regulations 2001, and equivalent regulations in the devolved administration. The Daughter Directives will gradually supersede those earlier standards mentioned previously.

3.4 Scheme Description of Section 1

3.4.1 Section 1 option 1 from York Bypass (at A1237 Hoptrove junction) to Malton Bypass (at B1248 Musley Bank Junction)

The majority of the route corridor for option 1 is online with the existing A64. The locations where the route corridor goes slightly offline are from:

- Hazelbush Cottage to Sand Hutton road junction.
- West of Hutton Hill to Barnygate Lane junction.
- Sawkill Farm access junction to Roughborough Farm access junction.

The proposed route corridor for section 1 still comes within close proximity to the villages of Crambeck and Whitwell-on-the-Hill. The sensitive recreational areas described in the base line conditions are not within 200m from the centre of the proposed route corridor.

3.5 Property Banding

A count of the properties within 50m distance bands of the centre of the route corridor is summarised in table 3 below.

Distance Band from Centre of Route Corridor	Number of Properties
0-50m	25
50-100m	54
100-150m	49
150-200m	40
Total	168

Table 3 – Section 1 Route Corridor Property Bandings

3.6 Identification of Impacts of Section 1

3.6.1 Section 1 from York Bypass (at A1237 Hoptrove junction) to Malton Bypass (at B1248 Musley Bank Junction)

Construction Impacts

Construction activities and traffic management arrangements to manage traffic flows would result in a temporary deterioration in local air quality.

Disruption of this nature would occur along lengths of carriageway subject to traffic management travelling at reduced speeds such as tie-ins and an increase in construction traffic during activities such as excavation, importing and exporting materials.

However, it should be noted that pollution levels during road works only exist in the short-term then, beyond the construction stage, pollution levels would revert to those predicted for the scheme.

Air pollutants, other than road traffic emissions, have been considered under 'Disruption Due to Construction'.

Operational Impacts

A new road scheme may change traffic flows in a locality in a number of ways, with corresponding impacts on air quality. Road schemes are often perceived as having only negative effects. In some cases, however, the overall effects will be beneficial e.g. if a scheme relieves congestion, it can cause vehicles to operate in ways that produce less emissions, thereby reducing overall pollution levels. This occurs because vehicles operate most efficiently and produce least pollution when they are driven in freely flowing traffic at moderate speeds, although emissions increase with higher speeds. If traffic is re-routed, the

location where pollution levels are highest would change, and may be transferred away from populated areas where effects would be felt most. These effects may offset any increase in emissions caused by traffic using a new longer route or by increases in traffic flows.

Banding of the properties within 200m of the option gives an indication of the numbers of properties potentially affected by a change in air quality.

3.7 Possible Mitigation Measures of Section 1

3.7.1 Section 1 from York Bypass (at A1237 Hopgrove junction) to Malton Bypass (at B1248 Musley Bank Junction)

Construction Impacts

The use of efficient, well maintained plant and equipment would help to reduce any impact on air quality in the short term during the construction period.

Imposing restrictions on traffic management proposals would help to maintain steady traffic flows during the construction period. This practice, particularly during peak times of the day would help to reduce any short-term deterioration in air quality.

Operational Impacts

No further mitigation measures required

3.8 Impact Assessment of Section 1

3.8.1 Section 1 from York Bypass (at A1237 Hopgrove junction) to Malton Bypass (at B1248 Musley Bank Junction)

Construction Impacts

Whilst an accurate assessment has not been made, the levels of construction activity derived air pollution are not expected to exceed UK Air Quality Strategy limits.

Operational Impacts

Section 1 shows a very slight deterioration in localised air quality when compared to the 'do nothing' scenario. However, all pollutant concentrations at all receptors for the assessed opening year are well below the UK Air Quality Strategy objective and are therefore, air quality is unlikely to be a problem.

3.9 Summary of Section 1

3.9.1 Section 1 from York Bypass (at A1237 Hopgrove junction) to Malton Bypass (at B1248 Musley Bank Junction)

See overall summary.

3.9.2 Limitations and Assumptions of Section 1 from York Bypass (at A1237 Hopgrove junction) to Malton Bypass (at B1248 Musley Bank Junction)

Any potential reduction in pollution due to planted areas and screening has been ignored.

No further limitations or assumptions, other than those inherent in the air quality calculations as described in DMRB Volume 11 Environmental Assessment, section 3, part 1 Air Quality February 2003 and assumptions made regarding future traffic growth, speed and composition, were encountered during the assessment.

3.10 Potential Further Mitigation of Section 1 from York Bypass (at A1237 Hopgrove junction) to Malton Bypass (at B1248 Musley Bank Junction)

None

3.11 The Base Line Conditions of Section 2

The Base Line Conditions Section 2 from Malton Bypass (at Brambling Fields) to Seamer Bypass (at Seamer Carr)

Within the scope of the study area, the A64 can be identified as the main traffic route that is responsible for the majority of the effect on the air quality through the route corridor. Country roads will also have an effect on the air quality but to a much lesser extent.

There are numerous villages that are located within close proximity of the existing A64. The villages of Scagglethorpe, Rillington, West Heselton, Sherburn and Staxton are responsible for the majority of the total number of properties within 200m from the existing route.

The village of Rillington suffers the largest impact from traffic related air quality deterioration with the majority of the properties in the village within 200m of the existing route. This is due to the A64 currently passing straight through the middle of the village.

There are three schools that are located within the villages of Rillington, Sherburn and Staxton that should be considered as sensitive to deterioration in air quality. These schools are all within 200m from the existing route. Within these villages there are also playing fields that are also within 200m and could be identified as air quality sensitive recreational areas as well as parts of Ganton golf course.

Property Banding

A count of the properties within 50m distance bands from the existing routes is summarised in table 4 below.

Distance Band from A64	Number of Properties
0-50m	272
50-100m	167
100 –150m	209
150-200m	180
Total	828

Table 4 – A64 Malton Bypass to Seamer Bypass “Do Nothing” Property Bandings

3.11.1 The Legislative Framework Section 2 from Malton Bypass (at Brambling Fields) to Seamer Bypass (at Seamer Carr) On Line and Off Line Routes

The air quality standards operable in the UK are those specified in the European Union Directives and in the UK Air Quality Strategy (AQS), Air Quality Strategy – Addendum, The Air Quality (England) Regulations 2000 and The Air Quality (England) (Amendment) Regulations 2002.

Air quality standards in the EU were first established in the 1980s and Directives were issued to control smoke and sulphur dioxide (80/779/EEC), lead (82/884/EEC), nitrogen dioxide (85/203/EEC) and ozone (92/72/EEC). Subsequently, Directive 96/62/EEC introduced a framework for ambient air quality management in the EU. This Directive does not itself contain any specific air quality standards, but establishes the air pollution management and monitoring framework within which standards will apply: the standards themselves are published in a series of pollutant-specific ‘Daughter Directives’. The Air Quality Limit Values Regulations 2001, and equivalent regulations in the devolved administration transposed the framework directive in England. The Daughter Directives will gradually supersede those earlier standards mentioned previously.

3.12 Scheme Description of Section 2 (Online)

3.12.1 Section 2 (Online) from Malton Bypass (at Brambling Fields) to Seamer Bypass (at Seamer Carr)

The proposed route corridor starts online with the existing A64 but quickly goes offline so that the proposed route corridor is diverted to the south of Rillington. The route corridor continues offline in a northeasterly direction winding around the outskirts of West Heselton and East Heselton before becoming online for a short distance at Grange Cottage. The route corridor then realigns to the south of Sherburn and Ganton and then goes into a long northeastern straight that connects to Seamer Bypass.

There are two playing fields within the Scagglethorpe and Rillington as well as areas of Ganton golf course that are located within 200m of the centre of the proposed route corridor that could be considered as sensitive recreational areas.

Property Banding

A count of the properties within 50m distance bands of the centre of the route corridor is summarised in table 5 below.

Distance Band from Centre of Route Corridor	Number of Properties
0-50m	4
50-100m	13
100 –150m	16
150-200m	42
Total	75

Table 5 – Section 2 (Online) Route Corridor Property Bandings

3.13 Scheme Description of Section 2 (Off Line)

3.13.1 Section 2 (Off Line) from Malton Bypass (at Brambling Fields) to Seamer Bypass (at Seamer Carr)

From Malton Bypass the route corridor is redirected northwards before changing into a northeastern direction to the east of Scagglethorpe Grange. At this point the route corridor roughly follows the same alignment as the existing railway line all the way to Seamer Bypass. The route corridor occasionally weaves southwards in order to distance itself from properties around the areas of Poplars Lane and Station Cottages.

There are some areas to the northern limits of Glanton golf course that come within 200m from the route corridor centre that could be considered as a sensitive recreation location.

Property Banding

A count of the properties within 50m distance bands of the centre of the route corridor is summarised in table 6 below.

Distance Band from Centre of Route Corridor	Number of Properties
0-50m	32
50-100m	73
100 –150m	83
150-200m	102
Total	290

Table 6 – Section 2 (Off Line) Route Corridor Property Bandings

3.14 Identification of Impacts of Section 2 On Line and Off Line Routes

3.14.1 Section 2 from Malton Bypass (at Brambling Fields) to Seamer Bypass (at Seamer Carr)

Construction Impacts

Construction activities and traffic management arrangements to manage traffic flows would result in a temporary deterioration in local air quality.

Disruption of this nature would occur along lengths of carriageway subject to traffic management travelling at reduced speeds such as tie-ins and an increase in construction traffic during activities such as excavation, importing and exporting materials.

However, it should be noted that pollution levels during road works only exist in the short-term then, beyond the construction stage, pollution levels would revert to those predicted for the scheme.

Air pollutants, other than road traffic emissions, have been considered under 'Disruption Due to Construction'.

Operational Impacts

A new road scheme may change traffic flows in a locality in a number of ways, with corresponding impacts on air quality. Road schemes are often perceived as having only negative effects. In some cases, however, the overall effects will be beneficial e.g. if a scheme relieves congestion, it can cause vehicles to operate in ways that produce less emissions, thereby reducing overall pollution levels. This occurs because vehicles operate most efficiently and produce least pollution when they are driven in freely flowing traffic at moderate speeds, although emissions increase with higher speeds. If traffic is re-routed, the location where pollution levels are highest would change, and may be transferred away from populated areas where effects would be felt most. These effects may offset any increase in emissions caused by traffic using a new longer route or by increases in traffic flows.

Banding of the properties within 200m of the option gives an indication of the numbers of properties potentially affected by a change in air quality.

3.15 Possible Mitigation Measures of Section 2 On Line and Off Line Routes

3.15.1 Section 2 from Malton Bypass (at Brambling Fields) to Seamer Bypass (at Seamer Carr)

Construction Impacts

The use of efficient, well maintained plant and equipment would help to reduce any impact on air quality in the short term during the construction period.

Imposing restrictions on traffic management proposals would help to maintain steady traffic flows during the construction period. This practice, particularly during peak times of the day would help to reduce any short-term deterioration in air quality.

Operational Impacts

No further mitigation measures required

3.16 Impact Assessment of Section 2 On Line and Off Line Routes

3.16.1 Section 2 from Malton Bypass (at Brambling Fields) to Seamer Bypass (at Seamer Carr)

Construction Impacts

Whilst an accurate assessment has not been made, the levels of construction activity derived air pollution are not expected to exceed UK Air Quality Strategy limits.

Operational Impacts

The Section 2 On Line route shows deterioration in localised air quality when compared to the 'do nothing' scenario. However, all pollutant concentrations at all receptors for the assessed opening year are well below the UK Air Quality Strategy objective and therefore, air quality is unlikely to be a problem.

Section 2 (Off Line route) also shows deterioration in localised air quality when compared to the ‘do nothing’ scenario. However, all pollutant concentrations at all receptors for the assessed opening year are well below the UK Air Quality Strategy objective and therefore, air quality is unlikely to be a problem.

3.17 Summary of Section 2

3.17.1 Section 2 from Malton Bypass (at Brambling Fields) to Seamer Bypass (at Seamer Carr)

See overall summary.

3.17.2 Limitations and Assumptions of Section 2 from Malton Bypass (at Brambling Fields) to Seamer Bypass (at Seamer Carr)

Any potential reduction in pollution due to planted areas and screening has been ignored.

No further limitations or assumptions, other than those inherent in the air quality calculations as described in DMRB Volume 11 Environmental Assessment, section 3, part 1 Air Quality February 2003 and assumptions made regarding future traffic growth, speed and composition, were encountered during the assessment.

3.17.3 Potential Further Mitigation of Section 2 from Malton Bypass (at Brambling Fields) to Seamer Bypass (at Seamer Carr)

None

3.18 Overall Summary

Comparing section 1’s route corridor to the do minimum scenario shows a positive impact with an improvement at 783 properties, but deterioration at 45 properties. This improvement is due to the majority of section 1’s route corridor being online with the existing A64, and its deviation from the existing A64 to avoid the centres of the main villages along the route corridor.

Both the online and Off Line route corridors for section 2 show a positive impact when compared to the do minimum scenario due to the large decrease in the number of properties within the 200m property bandings, with an improvement at 538 properties and a deterioration at 290 properties for the on line route and an improvement at 164 properties and a deterioration at 4 properties for the Off Line route.

4 CULTURAL HERITAGE

4.1 Introduction

This Stage 1 Environmental Impact Assessment of the cultural and built heritage identifies the location, type, and importance of the known built heritage and archaeological constraints in relation to the route corridors of the proposed A64 widening. It identifies the impacts of the route on existing known cultural heritage features.

There have been a number of previous studies of the cultural heritage for other proposed road improvements, including desk based assessment and fieldwalking in advance of the Malton bypass in 1976 (Historic Environment Record nos ENY947 and ENY948). Previous schemes to improve the A64 have involved desk based assessments of the cultural heritage for a proposed Malton to Seamer bypass in 1991 (Historic Environment Record no ENY1737), and a proposed Rillington bypass in 2000 (Historic Environment Record no ENY1758). These were followed by geophysical magnetometry surveys between the York and Malton bypasses in 1992 (Historic Environment Record nos ENY1728-ENY1734), and for the proposed Rillington bypass in 1993 (Historic Environment Record no ENY2029).

The most significant archaeological work carried out within the route corridors has been the long term excavations undertaken in the area between West Heselton and East Heselton villages, principally around the sand and gravel quarry known as Cook's Quarry (Powlesland 2003). In addition to excavation, there has been an extensive geophysical survey carried out between East Heselton and Sherburn to the north of the A64, along the edge of the former wetlands (pers comm Ian White, English Heritage). This work has revealed human activity and occupation in the area throughout prehistory from the late Palaeolithic, or early Stone Age, through the Roman, early medieval and medieval periods. This has contributed to a very high level of known archaeological sites along the route corridors.

4.2 Assessment Techniques and Methodology

4.2.1 Guidelines

The mitigation measures for a Stage 1 response to the impact of road construction on the cultural and built heritage are based on the application of standard archaeological investigative and recording techniques, as outlined in PPGs 15 and 16, set within the context of local soil conditions and likely archaeological outcomes.

4.2.2 References

Stage 1 techniques as outlined in the *Design Manual for Roads and Bridges* (Volume 11) have been used throughout. These comprise principally of information previously recorded on the Historic Environment Record for North Yorkshire, and the National Monuments Record maintained by English Heritage. The large scale of archaeological research around West Heselton meant that background information was also sought from a previously published booklet on excavation and survey carried out over 25 years. Sources used are as follows.

4.2.3 Primary Sources

- Historic Environment Record for North Yorkshire
- National Monuments Record, English Heritage
- www.imagesofengland.org.uk, listed buildings website, English Heritage

4.2.4 Secondary Sources

- Powlesland, D, 2003, 25 Years of Archaeological Research on the Sands and Gravels of Heslerton, The Landscape Research Centre
- Wacher, J, 1974, The Towns of Roman Britain, London

4.3 Methodology

4.3.1 Baseline Survey

This Stage 1 assessment comprises a data-gathering exercise of the known cultural heritage. This is based on the Historic Environment Record maintained by the county or sub-region, and the National Monument Record. It provides a synthesis of important data within the route corridors, relating to the known sites and monuments, buildings of historic interest, registered parks and gardens, conservation areas and registered battlefields, but does not identify potential new sites.

4.3.2 Definition of Scales of Impact

The DMRB Manual does not prescribe scales of impact for cultural and built heritage. The following criteria, therefore, have been defined.

Archaeological Remains

The archaeological potential for each route option has been defined as either high, low, undefined or none. The definitions of areas having low or a high probability for archaeological potential are based on a variety of sources. Areas of low archaeological potential have been defined in relation to modern development and landscaping as recorded in fieldwork and on modern Ordnance Survey maps. Areas with a high probability for archaeological potential have been defined from the Historic Environment Record and the National Monuments Record. Where areas are not shown as having a high probability for archaeological or palaeoenvironmental potential this does not imply that they have no potential. Such areas merely appear to have a lesser potential on the basis of this current assessment. Areas of undefined potential are those sections in which there is insufficient information to make an informed decision. Areas of no archaeological potential are areas of modern development, where potential archaeological remains are known to have been removed.

Historic Buildings

The definition of impact on buildings of historic interest is based on their significance. At this stage, significance is based on whether they are designated as listed buildings or scheduled ancient monuments, and therefore of national significance or not. It is not possible to define all buildings of low, undefined or no potential within a Stage 1 report, unless they are already recorded within the Historic Environment Record.

4.3.3 Development of Possible Mitigation Measures

It is not possible to define adequate mitigation measures from a Stage 1 assessment, as it identifies only previously known cultural heritage features.

4.3.4 Assessment of Impacts

The assessment of impact upon the cultural heritage and historic buildings is usually defined as adverse, neutral or beneficial. These definitions are based on the effect of an impact upon the archaeological resource, and any standing building of historical significance. An adverse impact is defined as an impact that would damage or destroy the archaeological resource, standing building of historical significance, historic landscape, or that would affect the setting of a scheduled monument or listed building. A neutral impact is defined as an impact that would have no effect on the archaeological resource, standing building of historical significance, historic landscape, or affect the setting of a scheduled monument or listed building. A beneficial impact is defined as an impact that would enhance the archaeological resource, standing building of historical significance, historic landscape, or the setting of a scheduled monument or listed building.

4.3.5 Limitations to Surveys or Assessments

A Stage 1 assessment only examines the known archaeological and historic building resource. It does not attempt to define previously unknown archaeological potential through the examination of other primary and secondary sources, or field investigation. Field survey techniques are essential to define the heritage character of the route where the location, type and significance of any important archaeological remains and how they might be affected are not known with reasonable certainty, and where information is desirable to help finalise agreed mitigation measures. Without the use of excavation survey techniques it is not possible to define accurately the nature, condition or significance of any below ground archaeological remains, hence the description of such remains within this current report is limited to the definition of areas of potential.

4.3.6 Assumptions in the Assessment

A Stage 1 assessment examines the route corridors for Section 1 and the two route options for Section 2. It does not assess any possible construction techniques or junction design, nor does it assess the nature, size or location of associated works, such as balancing ponds, all purpose routes, compounds.

4.4 The Base Line Conditions of Section 1

4.4.1 The Base Line Conditions Section 1 from York Bypass (at A1237 Hopgrove junction) to Malton Bypass (at B1248 Musley Bank Junction)

From a total of 125 records in the Historic Environment Record and National Monuments record, there are 11 known sites of prehistoric date within the route corridor, including the findspots of three Neolithic polished stone axeheads and a stone chisel, a findspot of early Bronze Age pottery and two Bronze Age burial mounds. In addition, there are two findspots of unspecified worked flints and scrapers, as well as a cropmark ditch and dyke and a cropmark ditched enclosure and field system. As well as these known prehistoric sites, there are 42 cropmark and earthwork sites of unknown date. Some of these are the remains of medieval or post medieval field systems and quarries, but 15 may be prehistoric in origin.

There are 33 sites of known Roman date within the route corridor of Section 1, reflecting the fact that the A64 follows the line of the Roman road from York to Malton. York was an important town which became a *colonia* (a chartered town with a constitution based on that of Rome). Malton was the site of a large fort (*Derwentio*) and *vicus* (settlement associated with the fort). Most of the sites are associated with the pottery manufacturing centre at Crambeck, which is a scheduled ancient monument (number 29515). The scheduled area includes 15 entries in the Historic Environment record. As well as pottery kilns and waste dumps of pottery, the complex includes clay dumps, fuel stores, drying areas, stores, workshops and possibly accommodation for the workforce. These are contained within a series of small enclosures separated by boundary ditches. The scheduled area is bounded on its west side by the A64 and extended as far as the top of the steep river cliff above the River Derwent to the east. The complex extended beyond the bounds of the scheduled area, however, and kilns and dumps of waste pottery have been found outside it. Late or post-Roman cist burials (stone-lined graves), post-dating the pottery complex, have also been found in the area. Elsewhere, isolated finds of Roman coins have been recorded, and a tessellated pavement was excavated in advance of the construction of the Malton bypass, at Roughborough Farm. This indicates a building of high status, and it has been suggested that it may have come from a villa.

Although the cist graves found at Malbeck may have been post Roman, or early medieval in date, the only other evidence for activity of this period within the route corridor is the recovery of a hoard from the area of Lobster House. This comprised a lead box containing a silver coin, armlet and an unidentified object. Early medieval settlement has also been suggested at Hutton Hill, based on place-name evidence.

Medieval settlement survives largely in the form of earthworks and cropmarks, representing former field systems. There are 21 such sites recorded within the route corridor, including extensive areas of ridge and furrow, lynchets and hollow ways (former routeways). Many of the areas of ridge and furrow appear to relate to the former field systems of existing villages, which are of medieval origin, such as Whitewell-on-the-Hill, Claxton, Harton, etc. There is evidence of areas of former settlement at High Hutton, with former medieval crofts surviving as earthworks, and a rectangular platform marking the site of St Margaret's Church. In addition there is the site of a possible medieval cross at Stockton-on-the-Forest.

There are seven known sites of post medieval date recorded on the Historic Environment Record and National Monuments Record, though the villages along the route of the A64 are of considerable historic interest. The recorded sites include Claxton Hall, an eighteenth century house which became a lunatic asylum in 1851 and was burnt down in 1981, two ruined buildings, gate piers built by Castle Howard for a visit by Queen Victoria, cropmark field boundaries, two ponds, and a canal pier. Most of the standing buildings within the route

corridor are nineteenth century in origin, and this is reflected in the listed building entries. The earliest known building is Lobster House and Cottage, built in the seventeenth century, but largely rebuilt in the eighteenth century. Sandburn Cross has a seventeenth century inscription, but the cross shaft is probably earlier. Firwood Cottages, Home Farm and the former inn the Beehive, at High Hutton are all late eighteenth century in date, as is Crambeck Bridge. All remaining listed buildings, including a number of milestones along the A64, are nineteenth century in date.

4.5 The Legislative Framework Section 1 from York Bypass (at A1237 Hopgrove junction) to Malton Bypass (at B1248 Musley Bank Junction)

4.5.1 Legislation

The key legislation relating to archaeological remains is the Ancient Monuments and Archaeological Areas Act 1979. This sets out the legal framework for scheduled ancient monuments, and areas of archaeological importance. See Statutory Designations for SAMs.

4.5.2 Key Designations

The key designations relating to the cultural and built heritage are scheduled ancient monuments, listed buildings, conservation areas and world heritage sites.

4.5.3 Statutory Designations

SAMs are designated under the Ancient Monuments and Archaeological Areas Act (1979). Ancient sites considered to be of national importance are included on the list, and developers are required to consult the Department of Culture Media and Sport (DCMS) prior to undertaking any work on such a site including the removal of soil, demolishing, damaging, repairing, altering, adding to, flooding or tipping. English heritage advises the DCMS on applications for Scheduled Monument Consent. Scheduled monuments on Crown land may be exempt from the normal scheduling process where works are being undertaken by, or on behalf of, the government.

There is one scheduled monument within the route corridor:

- Roman pottery kilns and associated features at Crambeck. Number 29515.

Listed buildings and Conservation Areas are designated under the provisions of the Planning (Listed Buildings and Conservation Areas) Act 1990. Although statutory national designations, listed buildings are graded according to their significance. Grade I and grade II* buildings are considered to be of national significance and control over the issuing of consent to matters affecting such a building is exercised by English Heritage on behalf of the DCMS. Grade II buildings can be considered to have a regional significance and control over them is exercised by the local authority (district, borough or unitary), though English Heritage are required to be consulted in cases of proposed demolition. Crown buildings are exempt from listed building controls, but HM Government have undertaken that Crown bodies will usually operate as if these controls did apply.

There is one grade II* structure and 20 grade II structures within the assessment area. These are listed in Appendix 4.2

There is one conservation area within the route corridor. This is:

- Welburn

- In addition, there are new conservation areas proposed at Whitwell-on-the-Hill and High Hutton.

4.5.4 Non-Statutory Designations

English Heritage has produced a Register of Historic Battlefields (1995). Inclusion on the Register counts as a material consideration in determining applications for planning permission; although it does not of itself have legal effect. There are no registered battlefields within the route corridor.

English Heritage has produced a Register of Parks and Gardens of Special Historic Interest in order that they can be more fully appreciated. Inclusion on the Register counts as a material consideration in determining applications for planning permission; although it does not of itself have legal effect. There are no park and garden of special historic interest within the route corridor, although the route corridor is within the visual envelope of a registered park and garden. This is:

- Castle Howard, grade I

4.5.5 Policy Framework

North Yorkshire County Council has published a County Structure Plan, with subsequent amendments. Its environmental policies include policy E5, which states that development proposals which could result in damage to, or the destruction of, sites of archaeological importance will normally be refused. It does not contain specific policies conservation areas, listed buildings, registered parks and gardens and battlefields.

Ryedale District Council's Local Plan includes policies on conservation areas (Policies C1-C6), listed buildings (policies C7-C12), ancient monuments and archaeological sites (policies C13-C14), and historic parks and gardens (policy C15). The Local Plan for York City Council has a series of policies on the historic environment, including conservation areas (policies HE1-HE3), listed buildings (policies HE4-HE5), development affecting the character of historic locations (policies HE6-HE8), archaeology (policy HE10), trees and landscape (policy HE11) and historic parks and gardens (policy HE12).

Policies and Initiatives

Planning Policy Guidance: Archaeology and Planning Note 16 (November 1990) (PPG16) provides advice and guidance for property owners, developers, archaeologists, amenity societies and the public with regard to the preservation and recording of archaeological sites discovered under the development control systems. PPG16 gives particular emphasis to the desirability of preserving monuments *in situ* wherever possible.

PPG16 draws particular attention to the process of field evaluation as a means of determining the presence/absence of archaeological remains, and the need for developers to make 'appropriate and satisfactory provision for the excavation and recording of remains' that cannot be preserved *in situ*.

Planning authorities are urged to ensure that potential conflicts with developers are resolved prior to the granting of planning permission and that planning conditions are reasonable and practicable.

Planning Policy Guidance: Planning and the Historic Environment Note 15 (September 1994) (PPG15) provides advice and guidance concerning the protection of historic buildings, conservation areas and other elements of the historic environment. PPG 15 gives particular

emphasis to the assessment of the total historic character of a locality with a view to maintaining that character.

The same principles of conservation and methodological approach, as detailed in PPG 16, are incorporated into PPG 15.

The two guidance notes, PPG15 and PPG16, will be combined shortly into a new policy document, Planning Policy Statement 15. This currently exists in draft form only, but maintains the principles established by PPG15 and PPG16.

4.5.6 National Monuments Record

English Heritage curate the National Monuments Record (NMR) at their offices in Swindon. This consists of a list of known archaeological sites, casual finds, historic buildings and archaeological events within England. It is regarded as the definitive list for such data by English Heritage. There are, however, often discrepancies and omissions between the NMR and locally held Historic Environment Records and both require checking to gain an overview of the known archaeological data for any given area.

4.5.7 Historic Environment Record

North Yorkshire County Council holds the Historic Environment Record (HER) for North Yorkshire. This consists of a list of all known archaeological sites, casual finds and historic buildings in North Yorkshire, as well as incorporating listed buildings and the monuments designated as SAMs under the Ancient Monuments and Archaeological Areas Act (1979). It provides a baseline against which all development proposals are assessed. Summary extracts from the HER and NMR relevant to the route corridor are included in the gazetteer of archaeological and historical sites listed in Appendix 4.1.

4.6 Scheme Description of Section 1

4.6.1 Section 1 from York Bypass (at A1237 Hopgrove junction) to Malton Bypass (at B1248 Musley Bank Junction)

The route corridor follows approximately the line of the former Roman road from York to Malton. It passes to the south of the grade I registered park and garden of Castle Howard. Although the route corridor does not pass through any part of the park, it is visible from it, particularly from some of the viewpoints. The route corridor turns north at Whitwell-on-the-Hill, where it passes a bend in the River Derwent. Here, it runs north east of the scheduled ancient monument at Crambeck, which comprises the remains of a Roman pottery manufacturing complex, with associated features. This complex extends over a wider area than the scheduled ancient monument, and also includes an area of late Roman or post Roman burials. North-east of Crambeck, the route corridor passes to the north of the medieval village of High Hutton, but through the area of its associated field systems.

4.7 Identification of Impacts of Section 1

4.7.1 Section 1 from York Bypass (at A1237 Hopgrove junction) to Malton Bypass (at B1248 Musley Bank Junction)

Construction Impacts

It is not possible within a Stage 1 report to fully assess the impact on the archaeological resource and standing buildings, as much of the potential remains undefined. Of the known

archaeological potential, construction would have an adverse impact, in particular, on the Roman pottery manufacturing complex at Crambeck. Previous work has also shown the presence of human burials in this area. The other area of known archaeological potential is at High Hutton, where there are extensive remains of former field systems and settlement. These would also be adversely affected by any construction works. Any alteration to the existing route may adversely affect the grade II listed nineteenth century milestones along the length of the A64. A number of listed buildings also lie within the route corridor, though any adverse impacts could not be evaluated without more detailed construction proposals.

Operational Impacts

There would be an adverse impact on the grade I registered park of Castle Howard. Although it lies outside the route corridor, the current A64 is visible from the park, and any new route would almost certainly also be visible and impact upon the park's vistas. Without more detailed proposals for a new route, it is not possible at this stage to comment in detail on the operational impacts upon the built heritage. It is likely, however, to have an adverse impact on buildings of historic interest which lie close to the route, but it may also have a beneficial impact where the route of the A64 is taken away from any such buildings.

4.8 Possible Mitigation Measures of Section 1

4.8.1 Section 1 from York Bypass (at A1237 Hopgrove junction) to Malton Bypass (at B1248 Musley Bank Junction)

Construction Impacts

The current level of assessment is insufficient to define the scale of the construction impacts. This requires a more detailed desk-based assessment and a walkover survey, in order to more closely identify areas of potential. Where possible, mitigation should include the possibility of altering route proposals to avoid damaging archaeological remains, standing buildings, or the impact upon the park at Castle Howard. This should be followed by invasive and non-invasive mitigation measures to enable an evaluation of the precise archaeological nature of those areas likely to be impacted upon by road construction. These may include earthwork and building survey, geophysical survey, fieldwalking, and trial trenching. This would assist in assessing the location, type and significance of archaeological remains, and establish mitigative measures to protect the archaeological resource. Trial trenching should be on a sample basis to be agreed with the County Archaeologist and targeted particularly on areas deemed to have the greatest archaeological potential. Test pitting could be combined with trial trenching in order to recover artefacts and increase the likelihood of recovering prehistoric remains in particular. Invasive fieldwork should not be undertaken where the impact is neutral.

There will be a presumption for the preservation of standing buildings of historical significance *in situ*, wherever possible, and for listed buildings and other structures, mitigation measures will also include the preservation of their settings. Where preservation *in situ* is not possible, mitigation will include the physical removal and relocation of the structure, or preservation by record, whichever is most appropriate.

Operational Impacts

The impact of the route upon the historic field pattern should be mitigated through the restoration and replacement of field boundaries where possible. This should be done using a similar style of boundary to the existing. Mitigation measures, such as small plantations of

native trees could be used to mask the impact of the road upon the historic landscape, in particular to mitigate any impacts on the park at Castle Howard.

4.9 Summary of Section 1

4.9.1 Section 1 from York Bypass (at A1237 Hopgrove junction) to Malton Bypass (at B1248 Musley Bank Junction)

There is a high level of known archaeology within the route corridor of Section 1. There is a high potential for archaeological remains particularly around Whitwell-on-the-Hill and Crambeck. Evidence of cropmarks from aerial photographs, and the location of the route corridor on the line of the Roman road from York to Malton, would also suggest that apparently blank areas also have a high potential for archaeological remains.

4.10 The Base Line Conditions of Section 2 On Line widening from Malton Bypass (at Brambling Fields) to Seamer Bypass (at Seamer Carr)

There are a total of 411 known sites within the route corridor. Of these, 97 are of prehistoric date, including two findspots and two flint scatters of Mesolithic date, and five Neolithic findspots. There is excavated evidence of Neolithic settlement at four sites, at West Heselton. There is evidence of later prehistoric settlement, dating to the Bronze Age and Iron Age along most of the length of the route corridor, with a concentration around Rillington, Scampston and West and East Heselton. Sites include a number of findspots and cropmark enclosures, field systems and ring ditches. Excavations have revealed settlements and field systems at Heselton, dating to the late Bronze Age and early Iron Age, with associated cemeteries. An Iron Age square barrow cemetery on the east side of Rillington is a scheduled ancient monument, although burials are known to extend outside the scheduled area. There is also a Bronze Age barrow cemetery in this area, a Neolithic long barrow, and a field system and other features of Iron Age date. There is also a scheduled Bronze Age round barrow, now ploughed-out, near Sherburn. In addition to the sites recorded on the Historic Environment Record and National Monument Record, geophysical survey between East Heselton and Sherburn revealed intensive, multi-period settlement along the edge of the former wetlands.

There are 23 sites of known Roman date within the route corridor, most of which are finds of pottery or coins. In addition to these, a burial was found at Rillington, and settlements have been identified at West Heselton, Sherborn and Ganton. There is also a fort at Ganton.

Early medieval sites, of which there are eight within the route corridor, are centred around Heselton, where long-term research excavation has revealed an Anglian settlement and cemetery. The area has also produced two findspots of beads. In addition there is an early medieval cemetery at Windale Beck Farm.

There are 24 sites of known medieval date, mainly relating to existing villages, such as Scagglethorpe, Thorpe Bassett, Scampston, West and East Heselton, Sherburn, Ganton and Potter Brampton, which have medieval origins. At Thorpe Bassett, there is a windmill mound, and a pit and building platform have been excavated. Excavations at Sherburn revealed four buildings, as well as pottery. Other known sites include a moat at East Heselton, a deer park at Scampston, and six excavated kilns at Potter Hill Farm.

There are 17 known sites of post medieval date recorded on the Historic Environment Record and National Monuments Record, mainly relating to standing buildings or associated landscape features. The recorded sites include the manor houses at Scagglethorpe and Heselton, windmills at Thorpe Bassett and Sherburn, and watermills, ponds and mill races at Scampston, and Sherburn.

The 32 listed buildings include three medieval churches, of which only the Church of St Andrew at Rillington is listed grade I. The remaining listed buildings are of post medieval date, with two dating to the seventeenth century. There are seven eighteenth century houses listed within the route corridor, as well as a bridge, dovecote and garden walls. The majority of listed structures are nineteenth century in origin, including ten houses, two milestones and two churches. A lychgate and churchyard wall, cross and lamp and lamp standard, in the grounds of the nineteenth century grade I Church of St Andrew at East Heselton, are listed grade II.

4.10.1 Legislation

The key legislation relating to archaeological remains is the Ancient Monuments and Archaeological Areas Act 1979. This sets out the legal framework for scheduled ancient monuments, and areas of archaeological importance. See Statutory Designations for SAMs.

4.10.2 Key Designations

The key designations relating to the cultural and built heritage are scheduled ancient monuments, listed buildings, conservation areas and world heritage sites.

4.10.3 Statutory Designations

SAMs are designated under the Ancient Monuments and Archaeological Areas Act (1979). Ancient sites considered to be of national importance are included on the list, and developers are required to consult the Department of Culture Media and Sport (DCMS) prior to undertaking any work on such a site including the removal of soil, demolishing, damaging, repairing, altering, adding to, flooding or tipping. English heritage advises the DCMS on applications for Scheduled Monument Consent. Scheduled monuments on Crown land may be exempt from the normal scheduling process where works are being undertaken by, or on behalf of, the government.

There are two scheduled monument within the route corridor:

- Round barrow, Sherburn. Number NY813
- Iron Age barrow cemetery, East field, Rillington. Number NY1117

Listed buildings and Conservation Areas are designated under the provisions of the Planning (Listed Buildings and Conservation Areas) Act 1990. Although statutory national designations, listed buildings are graded according to their significance. Grade I and grade II* buildings are considered to be of national significance and control over the issuing of consent to matters affecting such a building is exercised by English Heritage on behalf of the DCMS. Grade II buildings can be considered to have a regional significance and control over them is exercised by the local authority (district, borough or unitary), though English Heritage are required to be consulted in cases of proposed demolition. Crown buildings are exempt from listed building controls, but HM Government have undertaken that Crown bodies will usually operate as if these controls did apply.

There are two grade I structures and 30 grade II structures within the route corridor. These are listed in Appendix 4.4

There are no conservation areas within the route corridor.

4.10.4 Non-Statutory Designations

English Heritage has produced a Register of Historic Battlefields (1995). Inclusion on the Register counts as a material consideration in determining applications for planning permission; although it does not of itself have legal effect. There are no registered battlefields within the route corridor.

English Heritage has produced a Register of Parks and Gardens of Special Historic Interest in order that they can be more fully appreciated. . Inclusion on the Register counts as a material consideration in determining applications for planning permission; although it does not of itself have legal effect. There is one park and garden of special historic interest within the route corridor. This is:

- Scampston Hall, grade II*

4.11 Policy Framework

North Yorkshire County Council has published a County Structure Plan, with subsequent amendments. Its environmental policies includes policy E5, which states that development proposals which could result in damage to, or the destruction of, sites of archaeological importance will normally be refused. It does not contain specific policies conservation areas, listed buildings, registered parks and gardens and battlefields.

Ryedale District Council's Local Plan includes policies on conservation areas (Policies C1-C6), listed buildings (policies C7-C12), ancient monuments and archaeological sites (policies C13-C14), and historic parks and gardens (policy C15). The Local Plan for Scarborough District Council has a series of policies on the historic environment, including conservation areas (policies E22-E24), listed buildings (policies E24-E26), archaeology (policy E28), and historic parks and gardens (policy E29).

4.11.1 Policies and Initiatives

Planning Policy Guidance: Archaeology and Planning Note 16 (November 1990) (PPG16) provides advice and guidance for property owners, developers, archaeologists, amenity societies and the public with regard to the preservation and recording of archaeological sites discovered under the development control systems. PPG16 gives particular emphasis to the desirability of preserving monuments *in situ* wherever possible.

PPG16 draws particular attention to the process of field evaluation as a means of determining the presence/absence of archaeological remains, and the need for developers to make 'appropriate and satisfactory provision for the excavation and recording of remains' that cannot be preserved *in situ*.

Planning authorities are urged to ensure that potential conflicts with developers are resolved prior to the granting of planning permission and that planning conditions are reasonable and practicable.

Planning Policy Guidance: Planning and the Historic Environment Note 15 (September 1994) (PPG15) provides advice and guidance concerning the protection of historic buildings, conservation areas and other elements of the historic environment. PPG 15 gives particular emphasis to the assessment of the total historic character of a locality with a view to maintaining that character.

The same principles of conservation and methodological approach, as detailed in PPG 16, are incorporated into PPG 15.

The two guidance notes, PPG15 and PPG16, will be combined shortly into a new policy document, Planning Policy Statement 15. This currently exists in draft form only, but maintains the principles established by PPG15 and PPG16.

4.11.2 National Monuments Record

English Heritage curate the National Monuments Record (NMR) at their offices in Swindon. This consists of a list of known archaeological sites, casual finds, historic buildings and archaeological events within England. It is regarded as the definitive list for such data by English Heritage. There are, however, often discrepancies and omissions between the NMR and locally held Historic Environment Records and both require checking to gain an overview of the known archaeological data for any given area.

4.11.3 Historic Environment Record

North Yorkshire County Council holds the Historic Environment Record (HER) for North Yorkshire. This consists of a list of all known archaeological sites, casual finds and historic buildings in North Yorkshire, as well as incorporating listed buildings and the monuments designated as SAMs under the Ancient Monuments and Archaeological Areas Act (1979). It provides a baseline against which all development proposals are assessed. Summary extracts from the HER and NMR relevant to the route corridor are included in the gazetteer of archaeological and historical sites listed in Appendix 4.3.

4.12 Scheme Description of Section 2 On Line from Malton Bypass (at Brambling Fields) to Seamer Bypass (at Seamer Carr)

4.12.1 Section 2 On Line from Malton Bypass (at Brambling Fields) to Seamer Bypass (at Seamer Carr)

The route corridor follows approximately the line of the A64 from Malton to Seamer. It passes to the south of Rillington, and through the southern end of the grade II* registered park and garden of Scampston Park. This includes ornamental pond and the watermill, mill race and pond. The route corridor runs north of West Heselton, and through the area of Cook's Quarry where there have been long-term excavations of multi-period settlements. At Sherburn, the route corridor runs just to the south of the village, but includes much of the area of medieval settlement. It also passes through the medieval settlements of Potter Brompton and Ganton, turning north from the current route of the A64 at Binnington. As well as the registered park at Scampston, the route corridor includes part of the scheduled monument of the Iron Age cemetery at Rillington, and the scheduled Bronze Age barrow at Sherburn.

4.13 Identification of Impacts of Section 2 On Line from Malton Bypass (at Brambling Fields) to Seamer Bypass (at Seamer Carr)

4.13.1 Section 2 On Line from Malton Bypass (at Brambling Fields) to Seamer Bypass (at Seamer Carr)

Construction Impacts

It is not possible within a Stage 1 report to fully assess the impact on the archaeological resource and standing buildings, as much of the potential remains undefined. Of the known archaeological potential, construction would have an adverse impact, in particular, on potential prehistoric cemeteries around Rillington, and the multi-period settlements around Heselton. In general, there is a high concentration of recorded archaeological sites, of all periods along most of the length of the route corridor, from west of Rillington to Willerby, would also be adversely affected by any construction works. Any alteration to the existing route may adversely affect the grade II listed nineteenth century milestones along the length of the A64. A number of listed buildings also lie within the route corridor, though any adverse impacts could not be evaluated without more detailed construction proposals.

Operational Impacts

There would be an adverse impact on the grade II* registered park of Scampston Park. The route corridor passes through the southern half of the park, and would have a large adverse impact on the landscape character of the park and its component parts. Without more detailed proposals for a new route, it is not possible at this stage to comment in detail on the operational impacts upon the built heritage. It is likely, however, to have an adverse impact

on buildings of historic interest which lie close to the route, but it may also have a beneficial impact where the route of the A64 is taken away from any such buildings.

4.14 Possible Mitigation Measures of Section 2 On Line from Malton Bypass (at Brambling Fields) to Seamer Bypass (at Seamer Carr)

4.14.1 Section 2 On Line from Malton Bypass (at Brambling Fields) to Seamer Bypass (at Seamer Carr)

Construction Impacts

The current level of assessment is insufficient to define the scale of the construction impacts. This requires a more detailed desk-based assessment and a walkover survey, in order to more closely identify areas of potential. Where possible, mitigation should include the possibility of altering route proposals to avoid damaging archaeological remains, standing buildings, or Scampston Park. This should be followed by invasive and non-invasive mitigation measures to enable an evaluation of the precise archaeological nature of those areas likely to be impacted upon by road construction. These may include earthwork and building survey, geophysical survey, fieldwalking, and trial trenching. This would assist in assessing the location, type and significance of archaeological remains, and establish mitigative measures to protect the archaeological resource. Trial trenching should be on a sample basis to be agreed with the County Archaeologist and targeted particularly on areas deemed to have the greatest archaeological potential. Test pitting could be combined with trial trenching in order to recover artefacts and increase the likelihood of recovering prehistoric remains in particular. Invasive fieldwork should not be undertaken where the impact is neutral.

There will be a presumption for the preservation of standing buildings of historical significance *in situ*, wherever possible, and for listed buildings and other structures, mitigation measures will also include the preservation of their settings. Where preservation *in situ* is not possible, mitigation will include the physical removal and relocation of the structure, or preservation by record, whichever is most appropriate.

Operational Impacts

The impact of the route upon the historic field pattern should be mitigated through the restoration and replacement of field boundaries where possible. This should be done using a similar style of boundary to the existing.

4.15 Summary of Section 2 On Line from Malton Bypass (at Brambling Fields) to Seamer Bypass (at Seamer Carr)

4.15.1 Section 2 On Line from Malton Bypass (at Brambling Fields) to Seamer Bypass (at Seamer Carr)

There is a very high level of known archaeological potential along most of the length of the route corridor, including two scheduled ancient monuments, and an extensive area investigated through long-term research excavation and survey and which has produced evidence of complex, multi-period settlement. It is likely that the entire length of the Section 2 On Line widening route corridor has the potential to contain complex archaeological deposits. In addition, the route corridor passes through a grade II* registered park.

4.16 The Base Line Conditions of Section 2 Off Line

4.16.1 The Base Line Conditions Section 2 Off Line

There are a total of 83 known sites within the route corridor. Of these, 18 are of prehistoric date, including four Neolithic axe head findspots, and seven Bronze Age findspots. The remaining seven sites are known field systems, enclosures and ring ditches, mostly identified through cropmarks. The most extensive site lies between East Heslerton and Sherburn, where geophysical survey has revealed multi-period settlement with associated field systems and cemeteries.

There are 10 sites of known Roman date within the route corridor, the majority of which are finds of pottery and coins, but also including the findspots of two bronze bells. There are also cropmarks of field systems around Scampston, and evidence for settlement has been excavated at Sherburn.

There are few known early medieval sites within the route corridor, though some of the features identified by geophysical survey between East Heslerton and Sherburn, are probably of early medieval date. Anglian pottery has been recovered from Sherburn, and there are two fragments of stone crosses in Sherburn church.

There are only two known sites of medieval date within the route corridor, both former field systems identified from cropmarks.

Known sites of post medieval date are limited to former features relating to the York to Scarborough railway line, which opened in 1845. Five stations are recorded, at Rillington, Scampston, Heslerton, Ganton and Weaverthorpe, where a signal box is also recorded. Weaverthorpe Station and signal box are also listed grade II. The only other listed buildings within the route corridor are the church of St Hilda at Sherburn, the lychgate and churchyard walls, and the village cross, all listed grade II.

4.17 The Legislative Framework Section 2 Off Line

4.17.1 Legislation

The key legislation relating to archaeological remains is the Ancient Monuments and Archaeological Areas Act 1979. This sets out the legal framework for scheduled ancient monuments, and areas of archaeological importance. See Statutory Designations for SAMs. There are no areas of archaeological importance defined for the route corridor.

4.17.2 Key Designations

The key designations relating to the cultural and built heritage are scheduled ancient monuments, listed buildings, conservation areas and world heritage sites.

4.17.3 Statutory Designations

SAMs are designated under the Ancient Monuments and Archaeological Areas Act (1979). Ancient sites considered to be of national importance are included on the list, and developers are required to consult the Department of Culture Media and Sport (DCMS) prior to undertaking any work on such a site including the removal of soil, demolishing, damaging, repairing, altering, adding to, flooding or tipping. English Heritage advises the DCMS on applications for Scheduled Monument Consent. Scheduled monuments on Crown land may

be exempt from the normal scheduling process where works are being undertaken by, or on behalf of, the government.

There are no scheduled monument within the route corridor

Listed buildings and Conservation Areas are designated under the provisions of the Planning (Listed Buildings and Conservation Areas) Act 1990. Although statutory national designations, listed buildings are graded according to their significance. Grade I and grade II* buildings are considered to be of national significance and control over the issuing of consent to matters affecting such a building is exercised by English Heritage on behalf of the DCMS. Grade II buildings can be considered to have a regional significance and control over them is exercised by the local authority (district, borough or unitary), though English Heritage are required to be consulted in cases of proposed demolition. Crown buildings are exempt from listed building controls, but HM Government have undertaken that Crown bodies will usually operate as if these controls did apply.

There are five grade II structures within the assessment area. These are listed in Appendix 4.6.

There are no conservation areas within the route corridor.

4.17.4 Non-Statutory Designations

English Heritage has produced a Register of Historic Battlefields (1995). Inclusion on the Register counts as a material consideration in determining applications for planning permission; although it does not of itself have legal effect. There are no registered battlefields within the route corridor.

English Heritage has produced a Register of Parks and Gardens of Special Historic Interest in order that they can be more fully appreciated. . Inclusion on the Register counts as a material consideration in determining applications for planning permission; although it does not of itself have legal effect. There is one park and garden of special historic interest within the route corridor. This is:

- Scampston Hall, grade II*

4.18 Policy Framework

North Yorkshire County Council has published a County Structure Plan, with subsequent amendments. Its environmental policies includes policy E5, which states that development proposals which could result in damage to, or the destruction of, sites of archaeological importance will normally be refused. It does not contain specific policies conservation areas, listed buildings, registered parks and gardens and battlefields.

Ryedale District Council's Local Plan includes policies on conservation areas (Policies C1-C6), listed buildings (policies C7-C12), ancient monuments and archaeological sites (policies C13-C14), and historic parks and gardens (policy C15). The Local Plan for Scarborough District Council has a series of policies on the historic environment, including conservation areas (policies E22-E24), listed buildings (policies E24-E26), archaeology (policy E28), and historic parks and gardens (policy E29).

4.18.1 Policies and Initiatives

Planning Policy Guidance: Archaeology and Planning Note 16 (November 1990) (PPG16) provides advice and guidance for property owners, developers, archaeologists, amenity societies and the public with regard to the preservation and recording of archaeological sites discovered under the development control systems. PPG16 gives particular emphasis to the desirability of preserving monuments *in situ* wherever possible.

PPG16 draws particular attention to the process of field evaluation as a means of determining the presence/absence of archaeological remains, and the need for developers to make ‘appropriate and satisfactory provision for the excavation and recording of remains’ that cannot be preserved *in situ*.

Planning authorities are urged to ensure that potential conflicts with developers are resolved prior to the granting of planning permission and that planning conditions are reasonable and practicable.

Planning Policy Guidance: Planning and the Historic Environment Note 15 (September 1994) (PPG15) provides advice and guidance concerning the protection of historic buildings, conservation areas and other elements of the historic environment. PPG 15 gives particular emphasis to the assessment of the total historic character of a locality with a view to maintaining that character.

The same principles of conservation and methodological approach, as detailed in PPG 16, are incorporated into PPG 15.

The two guidance notes, PPG15 and PPG16, will be combined shortly into a new policy document, Planning Policy Statement 15. This currently exists in draft form only, but maintains the principles established by PPG15 and PPG16.

4.18.2 National Monuments Record

English Heritage curate the National Monuments Record (NMR) at their offices in Swindon. This consists of a list of known archaeological sites, casual finds, historic buildings and archaeological events within England. It is regarded as the definitive list for such data by English Heritage. There are, however, often discrepancies and omissions between the NMR and locally held Historic Environment Records and both require checking to gain an overview of the known archaeological data for any given area.

4.18.3 Historic Environment Record

North Yorkshire County Council holds the Historic Environment Record (HER) for North Yorkshire. This consists of a list of all known archaeological sites, casual finds and historic buildings in North Yorkshire, as well as incorporating listed buildings and the monuments designated as SAMs under the Ancient Monuments and Archaeological Areas Act (1979). It provides a baseline against which all development proposals are assessed. Summary extracts from the HER and NMR relevant to the route corridor are included in the gazetteer of archaeological and historical sites listed in Appendix 4.5.

4.19 Scheme Description of Section 2 Off Line

4.19.1 Section 2 Off Line

The route corridor runs to the north of the current route of the A64, approximately following the line of the York to Scarborough railway line. It also runs north of the villages centred on the A64. It passes through the northern edge of the grade II* registered park and garden of Scampston Park. The route corridor runs just to the north of the Heslerton area and Cook's quarry where there have been long-term excavations of multi-period settlements. At Sherburn, the route corridor runs just to the north of the village, but includes part of the area of medieval settlement. It turns north from the current route of the A64 at Binnington.

4.20 Identification of Impacts of Section 2 Off Line

4.20.1 Section 2 Off Line

Construction Impacts

It is not possible within a Stage 1 report to fully assess the impact on the archaeological resource and standing buildings, as much of the potential remains undefined. Of the known archaeological potential, construction would have an adverse impact, in particular, on potential multi-period settlements around Heslerton. Although there is a relatively low level of known archaeological activity within the route corridor, the high level of known archaeological remains to the south suggests that there is a high potential for a archaeological remains of all periods along most of the length of the route corridor, from west of Rillington to Willerby. These would also be adversely affected by any construction works. The construction of a route within this corridor would also have an adverse effect on the grade II* registered park at Scampston.

Operational Impacts

There would be an adverse impact on the grade II* registered park of Scampston Park. The route corridor passes through the northern edge of the park, and would have an adverse impact on the landscape character of the park and its setting. Without more detailed proposals for a new route, it is not possible at this stage to comment in detail on the operational impacts upon the built heritage. It is likely, however, to have an adverse impact on buildings of historic interest which lie close to the route, but it may also have a beneficial impact where the route of the A64 is taken away from any such buildings.

4.21 Possible Mitigation Measures of Section 2 Off Line

4.21.1 Section 2 Off Line

Construction Impacts

The current level of assessment is insufficient to define the scale of the construction impacts. This requires a more detailed desk-based assessment and a walkover survey, in order to more closely identify areas of potential. Where possible, mitigation should include the possibility of altering route proposals to avoid damaging archaeological remains, standing buildings, or Scampston Park. This should be followed by invasive and non-invasive mitigation measures to enable an evaluation of the precise archaeological nature of those areas likely to be impacted upon by road construction. These may include earthwork and building survey, geophysical survey, fieldwalking, and trial trenching. This would assist in assessing the

location, type and significance of archaeological remains, and establish mitigative measures to protect the archaeological resource. Trial trenching should be on a sample basis to be agreed with the County Archaeologist and targeted particularly on areas deemed to have the greatest archaeological potential. Test pitting could be combined with trial trenching in order to recover artefacts and increase the likelihood of recovering prehistoric remains in particular. Invasive fieldwork should not be undertaken where the impact is neutral.

There will be a presumption for the preservation of standing buildings of historical significance *in situ*, wherever possible, and for listed buildings and other structures, mitigation measures will also include the preservation of their settings. Where preservation *in situ* is not possible, mitigation will include the physical removal and relocation of the structure, or preservation by record, whichever is most appropriate.

Operational Impacts

The impact of the route upon the historic field pattern should be mitigated through the restoration and replacement of field boundaries where possible. This should be done using a similar style of boundary to the existing.

4.22 Summary of Section 2 Off Line

4.22.1 Section 2 Off Line

Although the archaeological potential along most of the length of the route corridor is undefined, recorded archaeological sites and the proximity of the route corridor to areas of complex, multi-period archaeological remains suggest the potential is high. It is likely that the entire length of the Section 2 Off Line Route corridor has the potential to contain complex archaeological deposits. In addition, the route corridor passes through a grade II* registered park.

4.23 Overall Summary

4.23.1 The route corridor from York to Seamer, taking into account both the On and Off Line sections.

There is a high level of known archaeology within this area, with high potential for archaeological remains in the undefined areas. Many of these undefined areas may contain complex archaeological deposits.

Both the On Line and Off Line route corridors pass through a grade II* registered park.

There would be a significant adverse impact on the Cultural Heritage of the area.

5 DISRUPTION DUE TO CONSTRUCTION

5.1 Introduction

This Chapter describes the effects of construction of the Scheme on people and the natural environment from the start of the pre-construction works to the end of the contract maintenance period. Construction impacts such as noise, dust and loss of amenity, although temporary, may be significant and can affect people in their homes or workplace, pedestrians, cyclists and vehicle travellers. Construction work also has the potential to affect the natural environment such as watercourses, ecologically valuable land and the wildlife. It is therefore important that nuisance and disturbance to the local community and travellers on the A64 and the surrounding local network are kept to a minimum at this time.

The assessment of disruption due to construction includes impacts that could occur as a direct result of the construction process. For example, land take is not considered a construction impact unless additional land is acquired temporarily to accommodate site offices or otherwise facilitate construction.

Although the construction contract will include requirements and restraints to minimise construction impacts, some adverse affects are unavoidable. Assessment of these effects is not precise because their extent, severity and duration will depend on the Contractor's programme and methods of working and on external factors such as weather conditions that cannot be predicted at this time.

5.2 Assessment Techniques and Methodology

5.2.1 Guidelines

The assessment has been carried out in accordance with the guidelines contained in the Highways Agency Design Manual for Road and Bridges, Volume 11, Environmental Assessment, Section 3 Environmental Assessment Techniques, Part 3, "Disruption Due To Construction" to Sage 1 Level.

5.2.2 References

References have been made to previously published surveys, maps and reports, including: A64 Improvements, Welburn to Malton, Scheme Assessment Report, Volume 1,2 and 3, WS Atkins. 2000.

- Traffic Safety Measures and Signs for Road Works and Temporary Situations. Traffic Signs Manual, Chapter 8. 1991.
- Noise and Vibration Control on Construction Sites, British Standards 5228. Part 1.
- Highways Agency Design manual For Roads and Bridges:
- TD37/93, Scheme Assessment Reporting.
- Volume 11, Environmental Assessment

5.2.3 Methodology

Baseline Survey

Baseline survey information was obtained from previously published reports (see above), base plans and estimated quantities prepared by Capita Symonds for the proposed scheme to date.

Definition of Scales of Impact

No strict guidance is given in DMRB Volume 11, Section 3 Part 3 “Disruption Due to Construction” regarding the basis for determining the magnitude of impacts. Impacts will be described as slight, moderate, high or substantial adverse or beneficial or neutral depending on their overall affect on the sensitive receptors and user groups taking into account agreed mitigation in this report.

Development of Possible Mitigation Measures

As the initial scheme design has progressed, various mitigation proposals have evolved and have been developed for the proposed scheme through this early stage of the environmental impact assessment process and through the use of workshops and discussions between scheme assessors. Assessment and design are part of an iterative process. The proposals take a holistic view of the most serious impacts resulting from the scheme at the most sensitive receptor locations. As a result, suitable mitigation measures have been agreed that do not conflict with measures proposed to alleviate impacts elsewhere in this report. Mitigation measures have been chosen that also perform to an acceptable level in road safety and economic terms.

Assessment of Impacts

The assessment was completed by considering the possible impacts resulting from the construction operations associated with the proposed schemes. Groups particularly affected include all road users, landowners, businesses and residents of properties located within the vicinity of the proposed routes. The construction operations considered include earthworks, construction phase haulage activity, piling, mains service diversions, traffic management issues and access requirements. At this early stage of the assessment process these are given in general terms identifying significant or unusual construction impacts within the route corridors.

Limitations to Surveys or Assessments

The designs are based on ordnance survey mapping information and the outline route and junction plans therefore details of the scale of disruption are indicative only but serve as a comparison.

No detailed assessment of the ground conditions or availability of borrow or surplus fill capacity in the area has been made. Similarly, the suitability of potential haul routes to and from site has not been possible except in general terms. It is evident from environmental documentation that the area has had and in some locations still retains active aggregate extraction indicating a presence of possible borrow sites within the route corridor subject to negotiation with the local planning and waste regulation authority.

It has been assumed that the local unclassified network is unsuitable for most haulage operations further assessment of this will need to be carried out.

Assumptions in the Assessment

It is assumed that the Network Management of the completed highway will conform to current practice and procedure. Maintenance of the network is subject to change from time to time but it is not anticipated that there will be any significant changes to impact on the overall operation of maintenance between the time of the assessment and the start of construction.

5.3 The Base Line Conditions of Section 1

5.3.1 The Base Line Conditions Section 1 from York Bypass (at A1237 Hopgrove Junction) to Malton Bypass (at B1248 Musley Bank Junction)

The A64 between York and Malton consists of single two-lane carriageway from Hopgrove Junction to Steelmoor Plantation, dual carriageway from Steelmoor Plantation to Holmes Crescent and then back to single two-lane to the Malton Bypass. The Ordnance Survey plans indicate the A64 to have a relatively good alignment.

There are numerous road junctions along this section of the route varying in layout and size and these generally consist of ghost islands or minor road junctions. The area is essentially rural with hamlets and villages interspaced along the route. There are a number of farms, cottages and clusters of dwellings, which have access directly onto the A64. The route is used to gain access to field units throughout its length by slow moving agricultural vehicles and machinery. There are also a number of businesses located directly alongside or close to the route.

The route crosses the York to Malton railway near Barton Hill crossroads. There are also a significant number of watercourses of varying size and importance either crossed directly by the A64 or in close proximity to the route.

5.3.2 The Legislative Framework Section 1 from York Bypass (at A1237 Hopgrove junction) to Malton Bypass (at B1248 Musley Bank Junction)

The legislative framework for the assessment is set by the following:

- Control of Pollution Act 1974
- Waste Management Licensing Regulations 1994 as amended
- Environmental Protection Act 1990
- Town and Country Planning Act 1990 (relating to an application for spoil disposal if one is required)

5.4 Scheme Description of Section 1

5.4.1 Section 1 from York Bypass (at A1237 Hopgrove Junction) to Malton Bypass (at B1248 Musley Bank Junction)

This section follows the existing A64 alignment and is mainly on-line. However there are three locations where the construction will be off-line – Hopgrove Junction, Hazelbush Hill to High Lodge and Hutton Hill to High Hutton.

The proposed alignment for the upgrading of the existing two lane single carriageway seeks to avoid property and additional land purchase by following the existing alignment as far as is practical.

There are grade separated interchanges proposed at the following locations:

- Hopgrove Junction
- Hazelbush Hill
- High Lodge
- Harton Lodge Plantation
- Barton Hill
- Whitwell-on-the-Hill

- Holmes Crescent (Crambeck)
- High Hutton

At these junctions it will be necessary to permanently realign and upgrade the local road network in the vicinity of the A64. The extent of these works will be dependant on the existing pavement construction and the horizontal and vertical alignment.

The following communities are likely to be affected by the construction as a result of being within the route corridor.

- Stockton-on-the-Forest
- Flaxton
- Claxton
- Barton-le-Willows
- Barton Moor
- Whitwell-on-the-Hill
- Welburn
- Crambeck
- High Hutton
- Malton

There are number of individual residential properties, farms, hotel, catering and other business properties adjacent or in close proximity to the proposed alignment.

The proposed route will cross the York to Malton railway at Barton Moor and Cram Beck at Crambeck Bridge and upgrading or replacement of the existing structures is indicated as necessary.

5.5 Identification of Impacts of Section 1

5.5.1 Section 1 from York Bypass (at A1237 Hopgrove Junction) to Malton Bypass (at B1248 Musley Bank Junction)

Construction Impacts

Note the following items will be common to all route corridors of this section of the report. The main activities involved in the construction of the scheme include;

- Establishment of site offices and compounds;
- Temporary traffic management;
- Fencing;
- Site clearance;
- Permanent / temporary diversion of Statutory Undertakers apparatus;
- Implementation of ecological mitigation measures, for example - the relocation of badger setts;
- Pre-earthworks drainage;
- Temporary / permanent diversion of watercourses;
- Bridges/underpasses/other structures construction;
- Topsoil strip and storage;
- Bulk earthworks;
- Carriageway drainage;
- Road pavement construction;
- Finishes (safety fencing, signs and markings); and

- Landscape planting.

Each of these activities has potential to cause adverse environmental impacts, but the most significant potential impacts are detailed as follows:

Activity	Potential Impact
Establishment and use of offices and compounds	Land use Visual impact Noise Traffic noise
Diversion of services Temporary traffic management	Noise, dust, vibration, loss of amenity and severance.
Site clearance	Ecological (both terrestrial and aquatic)
Pre earthworks drainage Topsoil Strip and storage Bulk earthworks	Water quality Ecological (aquatic) Visual Air quality
Bulk earthworks and pavement construction	Noise, dust and vibration Traffic noise and vibration Water quality Air quality
Work in a watercourses Bridges/underpass construction	Noise, dust and vibration Water quality

Water Quality and Drainage

Pollution during construction could arise from several activities and may be in the form of suspended sediments, accidental spillage, litter and debris.

An increase in suspended sediment levels within a watercourse can have profound effects on flora and fauna. These effects can extend for a considerable distance downstream of the site. The main potential effects are as follows:

- Accumulation of solids on the bed of a watercourse can adversely affect fish spawning and nursery habits. Where salmon spawning gravels are present, solids can clog the inter-gravel spaces and suffocate eggs;
- Suspended solids can cause scale damage and reduce visibility for fish, resulting in weight loss due to lack of feeding and;
- Many invertebrate species and types of vegetation are also intolerant of sediment pollution.

Various construction activities lead to sediment release and could potentially cause unacceptable turbidity in the local watercourses and main rivers. Activities include topsoil stripping and bulk earthworks, excavation of drain trenches and outfalls (particularly in wet weather), spoil heaps and stockpiles and construction of drainage outfalls.

While sediment release cannot be prevented, mitigation measures should be implemented to minimise the quantity of sediment discharging to watercourses. Pre-earthworks drainage should be installed to prevent surface water running onto the site and to intercept potentially polluted run-off from the site. Settlement lagoons or filters should be used to trap silt upstream of any surface water outfalls. Spoil heaps and stockpiles should be located away from watercourses and drainage systems and run off from them should be directed to settlement lagoons before discharge into watercourses.

Construction activities carried out close to rivers or other watercourses and drains also involve a risk of pollution due to accidental spillage.

The activities most likely to result in damaging accidental spillages are:

- Placing concrete in structures
- Waterproofing the bridge substructure and deck; and
- Re-fuelling and maintaining construction plant

The Contractor will be required to implement measures to minimise the risk and damage of accidental spillages.

Disruption to Local Residents and Businesses

The affects of the construction on the A64 corridor and local area will be temporary but may be significant particularly to those living or working in the vicinity of the scheme. Disruption will be caused by both the main construction work and any pre-construction work that may be required. This disruption may not always occur at the main works site but could extend some distance beyond - for example mains diversion work by statutory undertakers or watercourse improvements.

Typical construction impact includes increase in noise, dust, vibration severance and loss of amenity. Affected parties will be local residents in their homes and travelling to work or local amenities, visitors, businesses (including farming), pedestrians, cyclists and horse riders.

Disruption to Road Users

Construction of the scheme will directly affect the A64 and the interconnecting local road network. In addition to permanent effects to these roads, there could be substantial disruption during the construction phase.

The Contractor will be required to prevent the spread of mud from the site on to the existing road network. It is inevitable that some temporary deposition of deleterious material will occur during construction operations. Damage in the form of potholes and over-run road edges are also likely, but can be rapidly repaired.

Construction of the tie-ins where the route goes from off-line to on-line, and the new side road junctions will necessitate some form of temporary traffic control, inevitably causing a degree of disruption to traffic on the trunk road. The duration of this disruption is likely to be over relatively short periods at any one location.

Temporary diversions or temporary traffic management on the local road network will cause minor delay and disruption to local traffic. While the numbers of road users involved could be small in comparison, these diversions and temporary traffic management works may be in place for several months at each of these locations.

In addition to the above direct effects of construction on road users, there will be indirect effects as construction plant and delivery vehicles accessing the site that will use the A64 throughout the construction period. To minimise the use of side roads by construction traffic, it will be necessary to impose temporary restrictions to site traffic by stipulating permitted routes in the contract documentation or imposing traffic orders in conjunction with the local highway authority.

Where possible, access to agricultural land should be maintained for agricultural vehicles and stock movements. Subject to discussions with landowners and tenants, it may be necessary to maintain access across the construction to adjacent fields.

The Contractor would be responsible for maintaining safe access to all public rights of way during the construction period.

Earthworks Materials

The amount of material to be imported for the purpose of replacing existing unsuitable material, to construct earthworks embankments and screening bunds and for carriageway construction is not known at this stage but it is assumed to be a significant quantity. The material will comprise largely unbound granular material and bituminous materials for the carriageway pavement construction and will be transported to site by the lorry load from quarries throughout the area.

Whilst it is anticipated that much of the unsuitable material excavated can be re-used on site for landscaping and the like, some surplus material may need to be disposed of off-site. It is not anticipated at this stage that any of this unsuitable material will be contaminated hence specialist removal and treatment is not anticipated. If contaminated material is identified processes and procedure to remove from the site or seal in situ will need to be established. Detailed discussions should take place with the local planning/waste regulation authority to establish potential borrow pits and disposal sites. Locations will determine decisions on suitable haul routes.

There is a possibility that recycled materials could be used for general fill but environmental constraints could inhibit their use. Primary aggregates (particles of naturally occurring material, principally crushed rock, sand and gravel) are available in the area. Secondary aggregates (principally colliery spoil, slate waste and china clay waste) and alternative materials (pulverised fuel ash and asphalt planings) could be allowed within the contract as long as they satisfy engineering and environmental criteria. The source of all construction materials will ultimately be a matter for the contractor.

Noise, Dust and Vibration

Construction plant and machinery such as generators and pumps will result in an increase in noise, dust and vibration levels. The severity of the impact will vary depending on the activities in progress, the noisiest typically being site clearance, piling and bulk earthworks, especially if rock excavation is necessary. While construction noise can be a nuisance to local people, it is temporary and of limited duration. To control the potential nuisance, the Contract should include restrictions on noise and vibration levels and working hours. These restrictions will be agreed with the Local Authority and monitored and recorded throughout the construction period.

Construction traffic will cause traffic noise and vibration. The impacts will be more noticeable along minor roads if they are used as haul routes. Following consultation with the local Highway Authority, it may be necessary to restrict the use of these routes for construction traffic and clauses should be included in the Contract where necessary as stated above.

Dust can be a considerable problem during dry periods of the year. Dust can be generated simply by wind, by the passage of construction plant and during construction operations. Dust should be minimised by careful consideration of the location of stockpiles, damping down with water spray and by minimising site traffic movements across dry excavated soil surfaces. It may also be necessary to provide temporary surfacing (such as stone infill) to minimise

trafficking the sub formation or by providing sprinkler systems for damping down at sensitive locations.

5.6 Scheme Conditions of Contract

The construction contract for the scheme will include several requirements and restrictions intended to minimise disruption due to construction. Some of these requirements are standard and apply to all major highway construction contracts while others are scheme specific.

The Contractor will be required to operate an Environmental Management system to BS EN ISO 14001 'Specification for Environmental Management Systems'. The Environmental Management System will identify all operations where there is a risk of environmental damage and will include detailed method statements for these operations.

The Conditions of Contract will include requirements governing the Contractor's insurances, interference with traffic and adjoining properties, noise and disturbance. The Conditions of Contract will also incorporate Special Requirements in respect of the Environment Agency and other authorities. In addition to these general requirements, the Specification will include site-specific requirements, defined in consultation with relevant statutory consultees.

5.6.1 Post Construction

After completion of the works there will be a small amount of completion work on landscaping and correction of any defects that become apparent. However, it is expected that the level of activity will progressively reduce following scheme opening.

Operational Impacts

Not applicable

5.6.2 Possible Mitigation Measures of Section 1

5.6.3 Section 1 from York Bypass (at A1237 Hopgrove Junction) to Malton Bypass (at B1248 Musley Bank Junction)

Construction Impacts

Note the following items will be common to all route corridors.

- Construction of the Scheme will inevitably cause a degree of disruption to local people and users of the A64 trunk road, despite the implementation of measures to minimise adverse effects. The most significant impacts are likely to be visual impact, dust, noise and vibration associated with works on the site, particularly site clearance, earthworks and bridges/underpasses construction, and traffic noise and disruption to road users associated with construction traffic on the existing road network in the vicinity of the site.
- Earthworks, drainage and the construction of structures have potential to cause major and extensive damage local main rivers, tributaries and other watercourses by accidental spillage of pollutants or by discharge of sediment. Good site practice measures will minimise the risk of such damage.
- Archaeological and other sensitive areas should be protected by fencing prior to any construction works.

- Site compounds, working and storage areas should be kept to a minimum necessary for safe and effective working and they should be located so that they do not cause any detrimental environmental impact.
- Consideration must be given to fully utilising the existing carriageway wherever practical (subject to pavement analysis and design criteria) incorporating alignment and construction into the permanent works either wholly or partially. This should include the opportunity to recycle material on site to reduce additional haulage movement and use of quarried materials.
- Phasing of the construction programme should take into account the opportunity to construct off line – allowing substantial sections of the new construction, including structures, to be completed without significant disruption to normal traffic flow or the daily activities of the local community. An echelon approach to completion of sections will minimise the duration of the delay period although the intensity of the work will be high at locations where sections of work are being joined into the A64.
- To maintain traffic flow on the A64 during the construction phase temporary traffic management should be designed to maintain two-way traffic flow wherever practical – safety of the public and construction operatives will govern the regimes operated. Use of the local network for the diversion of traffic other than emergencies should be avoided to minimise disruption of local communities, A64 mainline traffic and to preserve the construction of the minor roads.
- Forward planning of all temporary traffic management operations should be undertaken with adequate contingencies for emergencies – thorough and regular liaison with emergency services, contractors, subcontractors, local authorities, suppliers, haulage companies and local community groups should take place to ensure that disruption and delay are minimised. The opportunity to use matrix signs to advise and warn road users of current and anticipated delay and disruption during the construction period should be considered.
- To limit the effect of construction vehicle movements on local communities, the main routes to the site should be limited to the A64. Side roads will have to be utilised in some instances to gain access to some areas of the site and these routes should be protected from unrestricted use by construction traffic. The Contract should include clauses relating to restricted routes, frequency and time of use of some routes and any repair, cleaning and sweeping requirements.
- The use of traffic signals can cause significant delay to trunk road traffic and it may be necessary to impose restrictions on time, duration and length of their operation in order to minimise their impact on the travelling public, keep disruption to a minimum and prevent the use of the local road network for ‘rat running.’ Consideration should be given to temporary traffic orders limiting the use of the local road network and the enforcement of such orders to deter ‘rat running’ and the nuisance caused to local communities.
- Phasing of the works to allow the construction of noise bunds, permanent realignment of minor roads, completion of structures and permanent diversions of public footpaths should be made to limit the duration of potential disruption and to enable the benefits of these to come into affect as soon as practical during the construction phase.
- Various construction activities could lead to sediment release and contamination of watercourses. Mitigation measures which would minimise the amount of contamination should include:
 - Pre-earthworks drainage to prevent surface water running onto the site and intercept contaminated water run-off from the site.
 - Settlement lagoons/filter beds to trap silt upstream of outfalls.
 - Spoil heaps and stockpiled material located away from watercourses and drainage systems, with run-off from these directed to suitable lagoons before release into the watercourse.

- Consideration should also be given to the maintenance of access between fields severed by off-line construction for maintenance of stock movements where required by landowners and/or their tenants.
- The programme for the sequencing of the work should consider opportunities to minimise disruption to the harvesting of crops or the grazing of animals wherever possible.
-
- Liaison with the police traffic management, the main contractor, sub-contractors, suppliers, local businesses, local service providers and communities both prior to the works commencing and during the construction will mitigate some of the affects that will inevitably occur.

Operational Impacts

Not applicable

5.7 Impact Assessment of Section 1

5.7.1 Section 1 from York Bypass (at A1237 Hopgrove Junction) to Malton Bypass (at B1248 Musley Bank Junction)

Construction Impacts

The impact of the proposals to the area, the residents, businesses and road users will be significant for the period of the construction as a result of the proposal to utilise the existing alignment in the most part for the new route. On completion of the works the impact from construction operation will reduce as all phases including the construction phase maintenance requirements are completed.

The transportation of imported materials to the site will have a high adverse impact on the A64 and the local road network. This impact may be increased or decreased dependant on the final selection of borrow pit and waste disposal site location, haul route planning and the re-use of materials either on site or locally.

The temporary traffic management works will cause a high to substantial impact on road users but will be limited to short intensive works to bring new sections of the work on line. The delays for the completion of structures, such as the installation and completion of bridge decks, will have a moderate impact as it is anticipated that use of new and temporary carriageway will allow traffic to avoid the immediate site area.

The construction works will traverse a number of watercourses and run-off from the earthworks and haul routes as well as possible pollution during construction will impact on local drainage. The impact will be dependant on the proximity of the watercourse and the construction activity. The provision of interceptors and sustainable drainage design in the completed construction as well as similar practice for temporary works will alleviate these impacts significantly.

The influence on access to agricultural land and businesses of the construction phase will produce a moderate adverse impact.

Severance and loss of amenity will be moderate during the construction of the works but will lessen as the works are completed. The provision of grade-separated junctions will provide safe crossing points and serve as improved links for the local community either side of the A64.

Operational Impacts

Not applicable

5.8 Summary of Section 1

5.8.1 Section 1 from York Bypass (at A1237 Hopgrove Junction) to Malton Bypass (at B1248 Musley Bank Junction)

The key issues relating to this section are as follows:

Issue	Potential Impact	Rank
Pre Construction works	Noise, dust, vibration, loss of amenity and severance. Prolongation of the disruption period	Moderate
Water Quality & Drainage	Pollution	Slight
Disruption To Local Residents & Business	Noise, dust, vibration, loss of amenity and severance.	High
Disruption To Road Users	Noise, dust, delay, loss of amenity and severance	High/Substantial
Earthworks	Noise, dust, vibration and loss of amenity.	Moderate

5.8.2 Limitations and Assumptions of Section 1 from York Bypass (at A1237 Hopgrove junction) to Malton Bypass (at B1248 Musley Bank Junction)

As stated in 5.2.3

5.8.3 Potential Further Mitigation of Section 1 from York Bypass (at A1237 Hopgrove junction) to Malton Bypass (at B1248 Musley Bank Junction)

No further mitigation is required for this section

5.9 The Base Line Conditions of Section 2 On Line

5.9.1 The Base Line Conditions Section 2 from Malton Bypass (at The Marrs) to Seamer Bypass (at Seamer Carr) – On Line

The A64 between the eastern end of the Malton Bypass near Rillington Fields and Seamer Carr consists of single two-lane carriageway. The ordnance survey plans indicate the A64 to have a relatively good alignment with villages, hamlets, farms and clusters of dwellings interspersed along the route.

The route is on line from Brambling Fields to Scagglethorpe where it runs off line to the south east of the existing A64 crossing to the northwestern side at Mill House near West Knapton. The alignment re-crosses the A64 between West and East Heslerton running to the south of East Heslerton before re-joining the A64 near Heslerton Grange. At Sherburn the route bypasses the village to the south of the existing alignment re-joining the A64 to the east of the village. At Potter Brompton the new alignment is off line south of Ganton and Binnington crossing the A64 east of Binnington then north running parallel to the Malton to Scarborough railway line until it reaches Seamer Carr.

The proposed alignment crosses the River Hertford just north of Staxton and intersects or is in close proximity to a number of smaller watercourses along the alignment.

5.9.2 The Legislative Framework Section 2 from Malton Bypass (at The Marrs) to Seamer Bypass (at Seamer Carr) – Off Line

The legislative framework for the assessment is set by the following:

- Control of Pollution Act 1974
- Waste Management Licensing Regulations 1994 as amended
- Environmental Protection Act 1990
- Town and Country Planning Act 1990 (relating to an application for spoil disposal if one is required)

5.10 Scheme Description of Section 2

5.10.1 Section 2 from Malton Bypass (at The Marrs) to Seamer Bypass (at Seamer Carr) – Off Line

The A64 between the eastern end of the Malton Bypass at Brambling Fields and Seamer Carr consists of single two-lane carriageway. The ordnance survey plans indicate the A64 to have a relatively good alignment with villages, hamlets, farms and clusters of dwellings interspersed along the route.

The On Line Route overlays or parallels the existing A64 running to the northwest or south east of the current alignment. The land usage is mainly arable or grazing land. There are a number of locations where the existing local road network is crossed by the new alignment on those sections that are 'off line'.

There are five grade separated junctions proposed at the following locations:

- Scagglethorpe
- Rillington
- West Heslerton

- Sherburn
- Potter Brompton/Ganton

The proposed alignment crosses the River Hertford just north of Staxton and intersects or is in close proximity to a number of smaller watercourses along the alignment.

The following communities are likely to be affected by the construction as a result of being within the route corridor:

- Scagglethorpe
- Rillington
- Scampston
- Thorpe Bassett
- West Knapton
- East Knapton
- West Heslerton
- East Heslerton
- Sherburn
- Potter Brompton
- Ganton
- Binnington
- Staxton

5.11 Identification of Impacts of Section 2 On Line

5.11.1 Section 2 from Malton Bypass (at The Marrs) to Seamer Bypass (at Seamer Carr) – On Line

Construction Impacts

These are common to all route corridors, see 5.5.1;

Post Construction

After completion of the works there will be a small amount of completion work on landscaping and correction of any defects that become apparent. However, it is expected that the level of activity will progressively reduce following scheme opening.

Operational Impacts

Not Applicable

5.12 Possible Mitigation Measures of Section 2 On Line

5.12.1 Section 2 from Malton Bypass (at The Marrs) to Seamer Bypass (at Seamer Carr) – On Line

Construction Impacts

These are common to all route corridors, see 5.6.3.

Operational Impacts

Not Applicable

5.13 Impact Assessment of Section 2 On Line

5.13.1 Section 2 from Malton Bypass (at The Marrs) to Seamer Bypass (at Seamer Carr) – On Line

Construction Impacts

The impact of the proposals to the area, the residents, businesses and road users will be significant for the period of the construction as a result of the proposal to utilise the existing alignment in the most part for the new route. On completion of the works the impact from construction operation will reduce as all phases including the construction phase maintenance requirements are completed.

The transportation of imported materials to the site will have a high adverse impact on the A64 and the local road network. This impact may be increased or decreased dependant on the final selection of borrow pit and waste disposal site location, haul route planning and the re-use of materials either on site or locally.

The temporary traffic management works will cause a high to substantial impact on road users but will be limited to short intensive works to bring new sections of the work on line. The delays for the completion of structures, such as the installation and completion of bridge decks, will have a moderate impact as it is anticipated that use of new and temporary carriageway will allow traffic to avoid the immediate site area.

The construction works will traverse a number of watercourses and run-off from the earthworks and haul routes as well as possible pollution during construction will impact on local drainage. The impact will be dependant on the proximity of the watercourse and the construction activity. The provision of interceptors and sustainable drainage design in the completed construction as well as similar practice for temporary works will alleviate these impacts significantly.

The influence on access to agricultural land and businesses of the construction phase will produce a moderate adverse impact.

Severance and loss of amenity will be moderate during the construction of the works but will lessen as the works are completed. The provision of grade-separated junctions will provide safe crossing points and serve as improved links for the local community either side of the A64.

Operational Impacts

Not Applicable

5.14 Summary of Section 2 On Line

5.14.1 Section 2 from Malton Bypass (at The Marrs) to Seamer Bypass (at Seamer Carr) – On Line

The key issues relating to this section are as follows:

Issue	Potential Impact	Rank
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Issue	Potential Impact	Rank
Pre Construction works	Noise, dust, vibration, loss of amenity and severance. Prolongation of the disruption period	Moderate
Water Quality & Drainage	Pollution	Slight
Disruption To Local Residents & Business	Noise, dust, vibration, loss of amenity and severance.	High
Disruption To Road Users	Noise, dust, delay, loss of amenity and severance	High/Substantial
Earthworks	Noise, dust, vibration and loss of amenity.	Moderate

5.14.2 Limitations and Assumptions of Section 2 from Malton Bypass (at The Marrs) to Seamer Bypass (at Seamer Carr) – On Line

As stated in 5.2.3.

5.14.3 Potential Further Mitigation of Section 2 from Malton Bypass (at The Marrs) to Seamer Bypass (at Seamer Carr) – Off Line

No further mitigation is required for this section.

5.15 The Base Line Conditions of Section 2 Off Line

5.15.1 The Base Line Conditions Section 2 from Malton Bypass (at Brambling Fields) to Seamer Bypass (at Seamer Carr) – Off Line

The A64 between the eastern end of the Malton Bypass near Rillington Fields and Seamer Carr consists of single two-lane carriageway. The ordnance survey plans indicate the A64 to have a relatively good alignment with villages, hamlets, farms and clusters of dwellings interspersed along or close to the route.

The Off Line Route parallels the A64 to the north of the existing route. The land usage is mainly arable and grazing land. The proposed alignment runs parallel to but does not cross the Malton to Scarborough railway line. There are numerous crossings of the existing highway network and access roads to residential properties, businesses, farms and statutory undertakers installations for example effluent/sewage treatment works and electricity sub-stations.

The proposed alignment crosses the River Hertford just north of Staxton and intersects or is in close proximity to a number of smaller watercourses along the alignment.

5.15.2 The Legislative Framework Section 2 from Malton Bypass (at Brambling Fields) to Seamer Bypass (at Seamer Carr) – Off Line

The legislative framework for the assessment is set by the following:

- Control of Pollution Act 1974
- Waste Management Licensing Regulations 1994 as amended
- Environmental Protection Act 1990
- Town and Country Planning Act 1990 (relating to an application for spoil disposal if one is required)

5.16 Scheme Description of Section 2 Off Line

5.16.1 Section 2 from Malton Bypass (at Brambling Fields) to Seamer Bypass (at Seamer Carr) – Off Line

At the Scarborough Road interchange this section leaves the existing A64 at The Marrs and follows a northerly route towards the Malton Scarborough railway where it then runs parallel to the railway until it rejoins the main carriageway at Seamer Carr.

There are three grade separated junctions proposed at the following locations:

- Malton Bypass (Scarborough Road)
- West Knapton
- Sherburn

At the Malton junction extensive realignment work and upgrading will be necessary utilising the existing layout and structures where practical.

The West Knapton and Sherburn junctions will only have minimal affect on the existing local road alignment where the slip roads join the existing carriageway. However it may be necessary to upgrade the existing pavement construction to accommodate increased traffic flow as a result of these proposals.

The following communities are likely to be affected by the construction as a result of being within the route corridor:

- Scagglethorpe
- Rillington
- Scampston
- West Knapton
- East Knapton
- West Heslerton
- East Heslerton
- Sherburn
- Potter Brompton
- Ganton
- Binnington
- Staxton

There are a number of residential properties, farms and other business properties in close proximity to the route. There are statutory authority installations located at the following:

- B1258 West Knapton (Effluent Works)
- West Knapton (Electricity Generating Station)
- Sherburn (Effluent Works)

The route will cross the River Hertford to the north of Saxton.

5.17 Identification of Impacts of Section 2

5.17.1 Section 2 from Malton Bypass (at Brambling Fields) to Seamer Bypass (at Seamer Carr) – Off Line

Construction Impacts

Note the following items will be common to all route corridors see 5.5.1;

Operational Impacts

Not applicable

5.18 Possible Mitigation Measures of Section 2

5.18.1 Section 2 from Malton Bypass (at Brambling Fields) to Seamer Bypass (at Seamer Carr) – Off Line

Construction Impacts

Note the following items will be common to all route corridors see 5.6.3.

Operational Impacts

Not applicable

5.19 Impact Assessment of Section 2

5.19.1 Section 3 from Malton Bypass (at Brambling Fields) to Seamer Bypass (at Seamer Carr) – Off Line

Construction Impacts

The impact of the proposals to the area, the residents, businesses and road users will be significant for the period of the construction as a result of the proposal to utilise the existing alignment in the most part for the new route. On completion of the works the impact from construction operation will reduce as all phases including the construction phase maintenance requirements are completed.

The transportation of imported materials to the site will have a high adverse impact on the A64 and the local road network. This impact may be increased or decreased dependant on the final selection of borrow pit and waste disposal site location, haul route planning and the re-use of materials either on site or locally.

The temporary traffic management works will cause a high to substantial impact on road users but will be limited to short intensive works to bring new sections of the work on line. The delays for the completion of structures, such as the installation and completion of bridge decks, will have a moderate impact as it is anticipated that use of new and temporary carriageway will allow traffic to avoid the immediate site area.

The construction works will traverse a number of watercourses and run-off from the earthworks and haul routes as well as possible pollution during construction will impact on local drainage. The impact will be dependant on the proximity of the watercourse and the construction activity. The provision of interceptors and sustainable drainage design in the

completed construction as well as similar practice for temporary works will alleviate these impacts significantly.

The influence on access to agricultural land and businesses of the construction phase will produce a moderate adverse impact.

Severance and loss of amenity will be moderate during the construction of the works but will lessen as the works are completed. The provision of grade-separated junctions will provide safe crossing points and serve as improved links for the local community either side of the A64.

Operational Impacts

Not applicable

5.20 Summary of Section 2

5.20.1 Section 3 from Malton Bypass (at Brambling Fields) to Seamer Bypass (at Seamer Carr) – Off Line

The key issues relating to this section are as follows:

Issue	Potential Impact	Rank
Pre Construction works	Noise, dust, vibration, loss of amenity and severance. Prolongation of the disruption period	Moderate
Water Quality & Drainage	Pollution	Slight
Disruption To Local Residents & Business	Noise, dust, vibration, loss of amenity and severance.	High
Disruption To Road Users	Noise, dust, delay, loss of amenity and severance	High/Substantial
Earthworks	Noise, dust, vibration and loss of amenity.	Moderate

5.20.2 Limitations and Assumptions of Section 3 from Malton Bypass (at Brambling Fields) to Seamer Bypass (at Seamer Carr) – On Line

As 5.2.3 above.

5.21 Potential Further Mitigation of Section 3 from Malton Bypass (at Brambling Fields) to Seamer Bypass (at Seamer Carr) – On Line

No further mitigation is required for this section.

5.22 Overall Summary

The Land Compensation Act allows for temporary re-housing when disruption due to construction is of a severity and duration that continued occupation during the works is not reasonably possible. Attempts would normally be made to implement other mitigation measures so that re-housing would not be necessary. At this stage it is not possible to determine where temporary re-housing would be applied to these schemes.

The Land Compensation Act permits insulation of eligible buildings against construction noise. This would be independent of any requirement for noise insulation as a result of traffic noise.

Minimising the import and export of earthworks materials at the design stage can reduce the volume of construction traffic associated with delivery or the removal of materials. Excavated materials that are not suitable for re use in the structural earthworks may be considered for use in landscaping areas or for noise bunds. Consideration for recycling of construction materials taken from the existing A64 should be considered including additional treatment of unsuitable materials to allow their use within the permanent works. The geotechnical assessment will identify possible borrow pits within or in close proximity to the works. These matters must be considered at an early stage of the design process to maximise the potential benefit.

Construction impact can be mitigated by the use of contractual restraints specifically aimed at achieving such. These must be managed and enforced by robust supervision methods in order to achieve their impact. Consultation with appropriate bodies including the local authorities at an early stage of the design process and document preparation will assist in the success of the measures.

Construction traffic could be restricted to defined routes or corridors with restrictions on the hours of use. Adequate liaison, pre programming, signing and guarding of haulage operations will lessen the overall impact. Consultation should take place regularly with all relevant parties – management of this works is essential.

Central management of the route corridor for the temporary traffic management, deliveries and export of waste would play a key role in minimising disruption and cumulative knock-on affects along the A64 route.

Disruption to road users could be limited by good programming and planning of the works in particular at locations where the new works tie in with the existing. Similarly design of alignment and structures should consider the opportunity for mitigation of disruption.

6 ECOLOGY AND NATURE CONSERVATION

6.1 Introduction

This section describes the ecological and biodiversity interest within a study area 0.5km each side of each route and assesses the impact of the routes on this interest. Measures are proposed to mitigate these impacts. The ecological impact of the two route options for Section 2 from Malton Bypass (at Brambling Fields) to Seamer Bypass (at Seamer Carr) are assessed taking into account the proposed mitigation measures. For Section 1 from York Bypass (at A1237 Hopgrove junction) to Malton Bypass (at B1248 Musley Bank Junction) a single route option is assessed, a previous study having considered different route options.

6.2 Assessment Techniques and Methodology

6.2.1 Guidelines

This assessment of the ecological and nature conservation impact of junction options follows the guidelines for a Stage 1 assessment given in the *Design Manual for Roads and Bridges Volume 11*.

6.2.2 References

Design Manual for Roads and Bridges. Volume 11 Section 3 Part 4 Ecology and Nature Conservation. 1993. Highways Agency.

RPS Clouston. 1993. Ecological Assessment Report of the A64 York – Malton Dualling Corridor.

6.2.3 Methodology

Baseline Survey

This assessment is based purely on data collected for a Stage 1 Assessment desk study. No field survey has been carried out. The study consulted English Nature, Environment Agency, Yorkshire Wildlife Trust, North Yorkshire County Council, Ryedale District Council, City of York Council, Scarborough Borough Council, North and East Yorkshire Ecological Data Centre, RSPB, Ryedale Badger Group, North Yorkshire Bat Group, Yorkshire Naturalists' Union, Scarborough Field Naturalists' Society.

For Section 1 from York Bypass (at A1237 Hopgrove junction) to Malton Bypass (at B1248 Musley Bank Junction) reference is also made to the 1993 Ecological Assessment Report by RPS Clouston of the A64 York – Malton Dualling Corridor. Field survey was carried out for this assessment along a 500m wide corridor centred on the proposed route line during September 1992. RPS Clouston's Habitat Survey maps are included in Appendix 6.1.

Definition of Scales of Impact

Scales of impact are based on the nature conservation evaluation of the habitats or species and the ecological impact of the proposal on them. The nature conservation evaluation of individual sites or interest features is based on the scale used for Multi-Modal Studies (WebTAG): very high (internationally designated sites), high (nationally designated sites and sites with Red Data Book species), medium (regionally important sites and sites with Biodiversity Action Plan species or habitats), lower (undesignated sites with local biodiversity interest) and negligible (sites with little or no biodiversity interest). The severity of impacts is

categorised according to the duration of the impact (long term, medium term or short term) and the severity of the impact (large adverse, moderate adverse, slight adverse, neutral or positive). Severity of adverse impacts is based on the extent to which the impact affects the integrity and coherence of the interest feature. Large adverse impacts will result in a situation where a habitat or group of habitats or species population is no longer maintained in its current state such that the site or population integrity is threatened. Moderate adverse impacts result in a significant adverse impact on habitats or species but where site or population integrity is not threatened. Slight adverse impacts are minor negative impacts. The impact assessment takes into account the potential impact of an operation and the moderating affect of any agreed mitigation measures

Development of Possible Mitigation Measures

Having identified the main impacts of the scheme, mitigation proposals have been drawn up to minimise the impacts of the scheme. Specialist advice given in DRMB Volume 10 is followed where appropriate.

Assessment of Impacts

Assessment of severity of impacts is based on the nature conservation evaluation of the habitats or species and the magnitude of the ecological impact of the proposal on them using the scales described above.

Limitations to Surveys or Assessments

This assessment is based entirely on a desktop study carried out in August 2004 and, in the case of Section 1, a Phase 1 Habitat Survey carried out by RPS Clouston in 1992. Should the scheme proceed to the next stage of assessment then detailed surveys of badger, bats, otter, water vole, white-clawed crayfish and great crested newt will be required for both sections and a Phase 1 Habitat Survey will be required for Section 2.

For Section 2 in particular the assessment has been made on proposals which are at an early stage of development; there is limited information available for junction location and design, land take, cuttings and embankments, construction activities etc. Without detailed proposals and field data it is not possible to put forward detailed mitigation proposals. However, the mitigation measures which have been suggested are thought to be appropriate based on the information available.

Within the time frame it has not been possible to agree the mitigation proposals with the Highways Agency, therefore these measures are subject to modification and development.

Assumptions in the Assessment

For Section 1 RPS Clouston's 1993 assessments of ecological importance have been used for non-designated sites. It is assumed that there has been no significant change in the ecological value of these sites. For Section 2, in the absence of field survey data, features of potential ecological interest which have not been classified as being of either county, national or international importance by either English Nature, North Yorkshire County Council or Yorkshire Wildlife Trust (i.e. as SSSI, cSAC, SPA, SINC, or listed in the Ancient Woodland Inventory) are provisionally assessed as being of local ecological importance.

For the purposes of this assessment all existing field and highway boundaries in Section 2 are assumed to be hedgerows of local ecological importance in the absence of detailed field survey to determine the true extent of the hedgerow network.

6.3 The Base Line Conditions of Section 1

6.3.1 The Base Line Conditions Section 1 from York Bypass (at A1237 Hopgrove junction) to Malton Bypass (at B1248 Musley Bank Junction)

Unless otherwise stated all features, both habitats and species, are of lower ecological importance.

The southern part of the study corridor is an open landscape of large fields of arable and improved grassland, with occasional blocks of plantation woodland, the majority of which are coniferous. Hedgerows are generally species-poor. In the vicinity of Stockton Common the corridor runs through an area of wind blown sand and here there are more extensive areas of both broadleaved and conifer woodland, including King's Moor Plantation, Sandburn Wood and Black Dyke Plantation, extending both sides of the existing A64. These woodlands have been planted on what was once lowland heath and nationally notable water beetles (*Agabus chalconatus* and *A. uliginosus*) have been recorded from them.

North of Barton Hill the study corridor enters the Howardian Hills and includes a section of the River Derwent which is designated as a candidate Special Area of Conservation and is of very high ecological importance. In this more dissected landscape there are extensive areas of ancient semi-natural woodland both along the Derwent Valley and tributary valleys, notably the woodland in Kirkham Park, part of the Kirkham Park and Riverside Site of Special Scientific Interest (high ecological importance) and Gillylees and Pretty Woods and Ox Carr and Ben Woods, both of which are Sites of Importance for Nature Conservation (medium ecological importance). This hilly landscape also supports more species-rich roadside verges than are found to the south and hedgerows also tend to be more diverse.

A number of streams and field drains are either crossed by the existing A64 or run through the study corridor. Water vole have been recorded within recent years on Old Foss Beck at the southern end of the scheme and are potentially present on other water courses within the study corridor. Otter have been recorded on Cram Beck and the River Derwent, which lies east of the A64. Otter are considered to be increasing in numbers in the Derwent catchment and are likely to use streams in the study area either now or in the near future. White-clawed crayfish have been recorded from Spital Beck at Barton Hill and the River Derwent and could be present in other watercourses within the study corridor. Otter, water vole and white-clawed crayfish are all of medium ecological importance. Kingfisher are recorded from Spital Beck. Great crested newt have been recorded from a number of ponds just outside the study corridor and it is possible that this species is present in ponds within the corridor, of which there are several, as well.

There are records of bats along the entire length of the study area and a number of mature trees which could host bat roosts are present along the existing A64, as well as buildings with bat roost potential. Features of importance for bats are potentially of medium ecological importance. Badgers have been recorded along the entire length of the study corridor.

6.4 The Legislative Framework Section 1 from York Bypass (at A1237 Hopgrove junction) to Malton Bypass (at B1248 Musley Bank Junction)

6.4.1 International designations

Ramsar Sites

Ramsar sites are designated as a wetland of international importance under the Convention of Wetland of International Importance 1971 Ramsar.

The UK Government has chosen to apply the same considerations for developments on Ramsar Sites as it does to SACs and SPAs (PPG9 Annex C para. 7.)

No Ramsar site is present within the study area.

European Designations

Special Areas of Conservation (SAC)

Special Areas of Conservation are designated under the EC Habitats and Species Directive 92/43/EEC. Where SACs have been submitted to the European Commission but have yet to be designated they are referred to as candidate SACs (cSACs). For the purpose of considering development proposals affecting them cSACs should be treated as if they had already been designated (PPG9 para 13.)

The River Derwent candidate Special Area of Conservation lies within the study area (see Plan 6.1). This is designated for the presence of river lamprey *Lampetra fluviatilis*. In addition the following qualifying features are also present: Water courses of plain to montane levels with the *Ranunculon fluitantis* and *Callitricho-Batrachion* vegetation, sea lamprey *Petromyzon marinus*, bullhead *Cottus gobio* and otter *Lutra lutra*.

Special Protection Areas (SPA)

Special Protection Areas are designated under Article 4 of Directive 79/409/EEC on the Conservation of Wild Birds.

None present within the study area.

Protection of species under European law

Annex IV(a) of the EC Habitats Directive lists animal species which are in need of strict protection. Article 12 prohibits:

- all forms of deliberate capture or killing of specimens of these species in the wild;
- deliberate disturbance of these species, particularly during the period of breeding, rearing, hibernation and migration;
- deliberate destruction or taking of eggs from the wild;
- deterioration or destruction of breeding sites or resting places.

All bat species, great crested newt *Triturus cristatus* and otter *Lutra lutra* are listed on Annex IV.

6.4.2 National Designations

Sites of Special Scientific Interest (SSSI)

SSSIs are designated under the Wildlife and Countryside Act 1981. Planning authorities are required to consult English Nature before granting planning permission for the development of land in an SSSI. An authority is also required to consult English Nature where an application is for development which is likely to affect an SSSI, even if the application site falls outside the SSSI. PPG9 para 30.

Three Sites of Special Scientific Interest lie within the study area. The River Derwent SSSI, Kirkham Park and Riverside SSSI and Mount Pleasant Quarry SSSI are present within the study area (see Plan 6.1). The River Derwent is designated for its aquatic plant and invertebrate communities, riverine birds, fish and otter. Kirkham Park and Riverside is notified for its geological interest, woodland, fen, marshland and grassland vegetation. Mount Pleasant Quarry is notified solely for its geological interest.

Protection of species under UK law

Section 9 of the Wildlife and Countryside Act 1981 protects animals listed in Schedule 5 of the Act from killing or taking and also protects nests and shelters used by these species and prohibits disturbance of these species in nests or shelters. Section 1 of the Act also provides for general protection of wild birds and their eggs and nests. Schedule 1 of the provides specific protection to selected bird species, including kingfisher, such that it is an offence to take, injure or kill a kingfisher or to take, damage or destroy its nest, eggs or young. It is also an offence to intentionally or recklessly disturb the birds close to their nest during the breeding season.

Badgers and their setts are protected under the Protection of Badgers Act 1992.

6.4.3 Regional and Local Designations

Local Nature Reserve (LNR)

LNRs are designated by local authorities under the National Parks and Access to the Countryside Act 1949. They contain examples of habitats of local significance and can make a useful contribution both to nature conservation and to the opportunities for the public to see, learn about, and enjoy wildlife.

None present within study area.

6.4.4 Non-statutory designations

Sites of Importance for Nature Conservation

These are sites of regional (North Yorkshire) importance. Whilst they have no legal status, they are adopted by local authorities, and policies concerning their protection are incorporated within local plans and structure plans.

Three SINC are present within the study area: Gillylees and Pretty Woods SINC and Ox Carr and Ben Woods SINC (see Plan 9053/s06/1/c). Both these sites are designated for their woodland vegetation.

The UK, City of York and Ryedale Biodiversity Action Plans (BAP)

Section 74 of the Countryside and Rights of Way Act 2000 requires the UK Government to produce a list of habitats and species which it considers are of principal importance for the conservation of biological diversity in England, in accordance with the 1992 UN Convention on Biological Diversity. It also creates a duty for the UK Government to take or promote the taking by others of steps to further the conservation of the listed habitats and species. The principal means of doing this is contained in the UK Biodiversity Action Plan which contains action plans for all the listed habitats and species.

The Ryedale and City of York BAPs are part of the delivery of the UK BAP at the local level. They contains action plans for species and habitats which are threatened in Ryedale and the City of York.

TYPE OF DESIGNATION	NAME AND LOCATION OF SITE, (OR SPECIES NAME)	NOTES
INTERNATIONAL DESIGNATIONS		
	none present	
SPECIES PROTECTED BY INTERNATIONAL LAW		
	none present	
EUROPEAN DESIGNATIONS		
candidate Special Area of Conservation	River Derwent	
SPECIES PROTECTED BY EUROPEAN LAW		
Habitats Directive	otter	also protected by Wildlife & Countryside Act
	great crested newt	also protected by Wildlife & Countryside Act
	bats (all species)	also protected by Wildlife & Countryside Act
NATIONAL DESIGNATIONS		
Wildlife & Countryside Act	Kirkham Park and Riverside SSSI	
Wildlife & Countryside Act	Mount Pleasant Quarry SSSI	
Wildlife & Countryside Act	River Derwent SSSI	
SPECIES PROTECTED BY NATIONAL LAW		
Wildlife & Countryside Act	Kingfisher	listed on Schedule 1
Protection of Badgers Act	Badger	
REGIONAL DESIGNATIONS		
	none	
LOCAL DESIGNATIONS		
	none	
NON-STATUTORY DESIGNATIONS		
Sites of Importance for Nature Conservation	Gillylees and Pretty Woods SINC	
Sites of Importance for Nature Conservation	Ox Carr and Ben Woods SINC	
UK GOVERNMENT POLICY INITIATIVES		
Countryside and Rights of Way Act 2000 Section 74 and UK Biodiversity Action Plan	white-clawed crayfish bats great crested newt depressed river mussel water vole	only pipistrelle is covered by UK BAP

Table 1 - Schedule of Designations within Section 1 Study Area

6.5 Scheme Description of Section 1

6.5.1 Section 1 from York Bypass (at A1237 Hopgrove junction) to Malton Bypass (at B1248 Musley Bank Junction)

The scheme is essentially an online widening, with minor deviations off line east of the existing road at Hopgrove and King's Moor and west of the existing road at High Hutton.

6.6 Identification of Impacts of Section 1

6.6.1 Section 1 from York Bypass (at A1237 Hopgrove junction) to Malton Bypass (at B1248 Musley Bank Junction)

Construction Impacts

There is potential for pollution of all watercourses both adjacent to and crossed by the road during construction phase, either through sedimentation or contamination from chemical or oil spills. Particularly towards the northern part of this section there is potential for this pollution to impact on the River Derwent cSAC into which the majority of watercourses within the study area drain. This could impact negatively on the fish, aquatic invertebrate and aquatic flora of the river.

At Hopgrove the upgrading of the roundabout and the construction of an offline section of new carriageway will result in the loss of areas of species-poor semi-improved grassland, hedgerows, mature trees and a pond. The pond has potential to support great crested newt, whilst the mature trees could host bat roosts. This offline section will also result in the realignment of a section of the Huntington and Stockton Drain. This watercourse has potential to host otter, water vole and white-clawed crayfish. This could lead to loss of habitat for any of these species should they be present. The new alignment will also cross this watercourse twice, requiring culverts.

Widening the road to the west will result in the loss of a small part of Damhill Wood conifer plantation. The road crosses a stream just north of Damhill Wood, the culverting of which may result in the loss of habitat for white-clawed crayfish and water vole.

The road runs offline to the east of the existing carriageway at King's Moor to avoid houses on the west side of the existing road. This results in the loss of sections of conifer and mixed plantation and a small area of semi-natural woodland at Hazelbush Wood and High Plumps Plantation. As the road moves back online a redesigned junction and overbridge results in the loss of semi-natural woodland from Sandburn Wood.

At Harton Lodge the redesigned junction layout and overbridge will result in the loss of semi-natural woodland from Harton Lodge Plantation and a shelterbelt running along the eastern side of the existing road south of the plantation. In addition both the main carriageway and the minor road cross a stream running through the plantation, which will result in potential habitat loss for white-clawed crayfish due to the lengthening of the culvert.

A pond lies in the grounds of Harton Lodge Farm which could potentially host great crested newt. The widened carriageway runs very close to the edge of this pond, so if newts are present there is potential for both habitat loss and the death of individual newts from machinery, as well as potential for pollution of the pond.

To the north and south of Spitalbeck Inn the road crosses a stream/drain. The northern watercourse is also crossed by a new overbridge. The culverting of this watercourse will potentially result in habitat loss for water vole and white-clawed crayfish.

At Barton Hill the road is partly realigned to the north-west of the existing carriageway and raised on an embankment. The landtake required for this will result in the loss of areas of semi-improved grassland, unimproved grassland, tall-ruderal herbs, semi-natural woodland and scrub. In addition two ponds which could potentially host great crested newt lie close to the new road, so if newts are present there is potential for both habitat loss and the death of individual newts from machinery, as well as potential for pollution of the ponds. The road also crosses Spital Beck at Barton Hill. This stream is known to support white-clawed crayfish and water vole could also be present. The construction of the bridge or culvert used to cross this stream will result in habitat loss for white-clawed crayfish and potentially for water vole too. Kingfisher are present on Spital Beck and this species could be disturbed during construction. Just to the north of Barton Hill the road will cross a tributary of Spital Beck, which will have very similar impacts to those on Spital Beck.

At the redesigned junction of Shepherdsfield Lane and the A64 there will be loss of species-poor semi-improved grassland due to landtake.

The crossing of Cram Beck will require loss of semi-natural ancient woodland both sides of the road, encroaching into both Gillylees Wood and Stone Cliffe Wood. Otter are known to use Cram Beck and their usage of the beck may be disturbed during construction, whilst there is also potential for pollution of the beck and the River Derwent, which is only a few hundred metres downstream at this point. As a bridge will be used for the crossing there is unlikely to be any loss of white-clawed crayfish habitat, should they prove to be present, as this species will live in shaded streams.

Immediately north of Gillylees Wood a section of her-rich grassland on the western verge of the existing A64 will be lost. Further north at Hutton Hill a significant proportion of the young woodland in New Plantation will be lost to landtake, whilst on the eastern side of the road an area of calcareous roadside verge grassland will be lost.

At Leyland's Hill and Trousdale Hill an area of semi-improved grassland with species-rich hedgerows and mature trees with potential as bat roosts will be lost where the new road veers offline to the west of the existing carriageway. This offline section also runs through a small mixed plantation between Firs Wood and Botterills Plantation and will result in its total loss.

The new road alignment cuts through the corner of Botterill Plantation, resulting in the loss of an area of mixed plantation woodland.

A number of mature trees with potential to host bat roosts will be felled as a result of the scheme, potentially leading to a net loss of bat roosts. Particular significant sites for tree loss not detailed above include those on North Lane, opposite Claxton Hall, along Scotchman Lane, opposite Field House, on Trout Hill, on Hutton Hill, the small plantation between Firs Wood and Botterills Plantation and east and south-west of Bar Farm.

The online and offline widening will result in loss of sections of hedgerow along the entire length of Section 1.

Operational Impacts

Cram Beck is known to be used by otter and, with currently increasing otter population in the Derwent valley, it is likely that other watercourses crossed by the A64 are used by otter either

now or will be in the near future. Without appropriate mitigation measures at these crossing points there is a potential for otters to stray on to the carriageway and be killed by vehicles. This is particularly likely during flood conditions when culverts could become filled with water, forcing otters to find an alternative means of crossing the road.

There is potential for pollution of the watercourses crossed by the new road, and consequently the River Derwent cSAC, from tanker spillages as a result of road traffic accidents and during road maintenance. See also Water Quality Chapter 17.

The new road alignment moves the carriageway closer to several ponds which could hold populations of great crested newt. If newts are present in any of these ponds there is a possibility of newts straying onto the new carriageway and being killed by vehicles unless measures are taken to prevent newts gaining access to the carriageway. These ponds could also suffer from similar pollution incidents to those described above for watercourses, threatening any newt populations present.

As the route follows the line of the existing A64 it is unlikely that there will be significant disruption of bat flightlines by the new road. Severance of other animal species home ranges, such as brown hare, if present, is also likely to be minimal for this reason.

There is unlikely to be increased severance of badger routes as there is only minor divergence from the existing line of the A64. However there are numerous records of badgers being killed crossing the existing road and unless measures are taken to prevent badgers crossing the road this is likely to continue along the new road.

6.7 Possible Mitigation Measures of Section 1

6.7.1 Section 1 from York Bypass (at A1237 Hopgrove junction) to Malton Bypass (at B1248 Musley Bank Junction)

Construction Impacts

See Water Quality chapter for details of mitigation of potential construction phase pollution of watercourses and ponds. These will include pollution control measures agreed by the Environment Agency designed to prevent any pollution of watercourses and ponds.

Loss of woodland and hedgerows can be partly mitigated by the planting of hedgerows along the road boundary and planting of native broadleaved woodland on embankments and cuttings (see Landscape chapter for details).

Trees identified as potential bat roosts which will be felled will be examined prior to felling and exclusion measures taken if required. Where trees used as bat roosts are felled, bat boxes will be erected on other trees or suitable structures in the vicinity.

Any badgers living in setts within the land take of the proposed road will need to be moved before construction starts.

If great crested newts are found in any of the ponds along the route following field survey then newt fencing will be erected along the boundary of the construction site to prevent newts entering the site.

The realigned Huntington and Stockton Drain will be reinstated to replicate the existing features present and to provide habitat for otter, water vole and white-clawed crayfish.

Measures will be taken to prevent harm to these species during construction if they prove to be present.

Operational Impacts

The Cram Beck crossing will be constructed in a manner which will allow otters to cross under the new road whilst the river is in flood. The culverts for all other stream crossings will be constructed in a manner which will allow otters to cross under the new road whilst these streams and drains are in flood. This will either entail an otter tunnel close to the stream but above the flood level, or an oversized culvert with ledges above the level of flood flows for otters to use. Badgers will also be able to use these road crossings. Fencing will direct both otters and badgers to the entrances of these tunnels. The design of all river and stream crossings will follow the guidance given in DMRB Volume 10 Section 4 Part 4 HA 81/99.

To reduce the likelihood of road kills, badger fencing will be installed along the entire length of the new road at the back of the verges. A number of badger tunnels will be provided in appropriate locations to allow badgers to cross the road. Badgers will also be able to use otter passages and farm accesses.

If great crested newts are found in any of the ponds along the route following field survey then newt fencing will be erected along the highway boundary to prevent newts venturing onto the carriageway.

See Water Quality chapter for mitigation of potential operational phase pollution of watercourses. These will include measures to contain any spillage of pollutants and prevent any pollution of watercourses including the River Derwent cSAC.

6.8 Impact Assessment of Section 1

6.8.1 Section 1 from York Bypass (at A1237 Hopgrove junction) to Malton Bypass (at B1248 Musley Bank Junction)

Construction Impacts

The agreed mitigation measures for water quality should ensure that there is no pollution of any water course, including the River Derwent, during the construction phase, so that the ecological impact will be neutral.

The hedgerow planting proposed as part of the landscaping scheme should fully mitigate against the loss of hedgerows. In most cases the newly planted hedges will contain a similar or greater diversity of shrub species to that in the hedgerows which are removed. As such the ecological impact on hedgerows will be neutral. Loss of plantation woodland, both coniferous and broadleaved can also be mitigated by woodland planting on embankments and in redundant field corners. This will result in a neutral impact from the loss of parts of Damhill Wood, High Plumps Plantation, Barton Hill, New Plantation and Botterills Plantation. However new planting cannot fully mitigate for the loss of areas of semi-natural woodland. In particular the loss of parts of Hazelbush Wood, Sandburn Wood, Harton Lodge Plantation and Stone Cliffe Wood will each have a slight adverse ecological impact as these woods are of lower ecological importance. The loss of part of Gillylees Wood however will have a moderate adverse ecological impact as this is part of the Gillylees and Pretty Woods SINC and of medium (county) ecological importance.

This route will result in the loss of a number of trees with high potential as bat roosts. Trees need to be of a considerable age before they have the structural complexity to be of high bat

roost potential, at least 50 and often over 100 years of age. Consequently the loss of these trees will not be fully mitigated by the tree planting schemes incorporated in the mitigation measures for 50 to 100 years post construction, so the ecological impact of the loss of these trees will be moderate adverse.

Provided that construction is restricted to normal working hours there should be no disturbance of otters using water courses crossed by the route, so the impact will be neutral.

The loss of a pond at Hopgrove will have either a moderate or slight adverse ecological impact dependant on whether great crested newts are present or not. The surrounding grassland appears to be species-poor and of negligible botanical interest, but would provide habitat for newts.

The realignment of the Huntington and Stockton Drain will lead to loss of riparian habitats of lower ecological interest botanically, but of potentially medium interest for otter, water vole and white-clawed crayfish and, whilst efforts can be taken to try and recreate these, it is unlikely that the resulting stream will be of comparable ecological interest. As a result there will be a slight adverse ecological impact on vegetation and a moderate adverse impact on species if they are present.

Whilst the individual habitats lost at Barton Hill are not of great significance in their own right the mosaic of habitats present enhances the ecological interest of the area such that its loss will have a slight adverse ecological impact. This loss of semi-natural vegetation could have a moderate adverse impact on great crested newts, should they be present in the pond at Barton Hill due to habitat loss.

The grassland lost at Shepherdsfield Lane and Leyland's Hill appears to be species-poor and of negligible ecological interest, such that the impact of this habitat loss will be neutral. The species-rich grassland on the verge north of Gillylees Wood and the Hutton Hill cutting are of lower ecological interest and the ecological impact of the loss of this grassland will be slight adverse in each case.

Field survey is required to ascertain whether any badger setts will be directly affected by the scheme. Likewise field survey is required to ascertain whether water vole and white-clayed crayfish are present on watercourses and great crested newt in ponds. It is therefore not possible to fully assess the ecological impacts of this scheme on these species. However Table 2 gives predicted impacts on these species should they be present for each watercourse and pond. In the case of great crested newts the erection of newt fencing should prevent newts being killed by construction vehicles or road traffic, so any impacts of the scheme on newts will be limited to issues of habitat loss.

Operational Impacts

Mitigation measures for otters using watercourses crossed by the road should prevent roadkill of this species and allow them to continue travelling along the watercourses, so the impact will be moderate beneficial as the culverts of the existing A64 make no provision for otter.

The agreed mitigation measures for water quality should ensure that there is no pollution of any water course, including the River Derwent, during operation, so that the ecological impact will be neutral.

Provision of badger tunnels and passages which both otters and badgers can use, together with badger fencing along the entire route should prevent roadkill and maintain badger routes. The

proposed mitigation should result in a reduction in the number of badgers killed by vehicles on the A64, giving a slight beneficial ecological impact.

It is not possible to assess the impact of the route on bat flightlines in the absence of field survey, however, as it more-or-less follows the line of the existing road, any impact is liable to be minimal.

As with construction impacts, the erection of newt fencing should prevent great crested newts being killed by road traffic should field survey establish that they are present in any of the ponds along the route. As such the potential operational impact on great crested newts would be neutral.

Severance of home ranges of badgers or other mammals, for example brown hare, is unlikely to be significant as there is no significant deviation of the new road from the line of the existing A64. Indeed severance is likely to be reduced due to the provision of badger and otter tunnels.

6.9 Summary of Section 1

6.9.1 Section 1 from York Bypass (at A1237 Hopgrove junction) to Malton Bypass (at B1248 Musley Bank Junction)

Table 2 summarises the ecological impacts of the scheme taking into account the proposed mitigation measures. The majority of the known impacts are slight adverse, however the loss of ancient woodland of county importance within the Gillylees and Pretty Woods Site of Importance for Nature Conservation will have a moderate adverse ecological impact which is not possible to fully mitigate without realigning the route to the east to avoid the site. In addition to this there is potential, should these species prove to be present at any of the locations identified, for there to be moderate adverse impacts on otter, water vole, white-clawed crayfish and great crested newt. Loss of mature trees along the route will result in the loss of potential bat roosts, again having a potentially moderate adverse ecological impact. The incorporation of provision for badgers and otters to cross the road without using the carriageway will have a beneficial ecological impacts for these two species.

There will be no impacts on the River Derwent cSAC, Kirkham Park and Riverside SSSI or Mount Pleasant Quarry SSSI.

Overall the route is assessed as having a moderate adverse ecological impact due to the loss of woodland in Gillylees Wood and potential impacts on protected species, however further survey is required to establish whether these species are present.

Site	Interest Feature	Scale (of importance)	Impact	Assessment
Hopgrove Roundabout*	Grassland and hedgerows east of Hopgrove roundabout	lower	habitat loss	neutral
	Mature trees with potential as bat roosts	potentially medium	potential loss of bat roosts	potentially moderate adverse
	Pond with potential to host great crested newt	potentially medium	potential loss of pond and newt colony	potentially moderate adverse
Huntington & Stockton Drain	Riparian habitats	lower	realignment of stream	slight adverse
	Potential for otter	potentially medium	road kill and habitat loss	potentially moderate adverse
	Potential for water vole	potentially medium	habitat loss	potentially moderate adverse
	Potential for white-clawed crayfish	potentially medium	habitat loss	potentially moderate adverse
Trees on North Lane*	Potential bat roosts	potentially medium	potential loss of bat roosts	potentially moderate adverse
Damhill Wood*	Conifer plantation	negligible	habitat loss	neutral
Stream north of Damhill Wood	Potential for otter	potentially medium	road kill	potentially moderate beneficial
	Potential for water vole	potentially medium	habitat loss	potentially moderate adverse
	Potential for white-clawed crayfish	potentially medium	habitat loss	potentially moderate adverse
Hazelbush Wood*	Conifer and semi-natural woodland	lower	habitat loss	slight adverse
High Plumps Plantation*	Conifer plantation	lower	habitat loss	neutral
Sandburn Wood*	Semi-natural broadleaved woodland	lower	habitat loss	slight adverse
Drain in Sandburn Wood	Potential for otter	potentially medium	habitat loss	potentially moderate beneficial
Mature trees opposite Claxton Hall*	Potential bat roosts	potentially medium	potential loss of bat roosts	potentially moderate adverse
Mature trees along Scotchman Lane*	Potential bat roosts	potentially medium	potential loss of bat roosts	potentially moderate adverse
Harton Lodge Plantation*	Semi-natural broadleaved woodland	lower	habitat loss	slight adverse

Site	Interest Feature	Scale (of importance)	Impact	Assessment
Stream through Harton Lodge Plantation	Potential for otter	potentially medium	road kill	potentially moderate beneficial
	Potential for white-clawed crayfish	potentially medium	habitat loss	potentially moderate adverse
Pond at Harton Lodge Farm	Potential for great crested newt	potentially medium	habitat loss and road kill	neutral
Mature trees east of carriageway opposite Field House*	Potential bat roosts	potentially medium	potential loss of bat roosts	potentially moderate adverse
Drain south of Spitalbeck Inn	Potential for otter	potentially medium	road kill	potentially moderate beneficial
	Potential for water vole	potentially medium	habitat loss	potentially moderate adverse
	Potential for white-clawed crayfish	potentially medium	habitat loss	potentially moderate adverse
Drain north of Spitalbeck Inn	Potential for otter	potentially medium	road kill	potentially moderate beneficial
	Potential for water vole	potentially medium	habitat loss	potentially moderate adverse
	Potential for white-clawed crayfish	potentially medium	habitat loss	potentially moderate adverse
Barton Hill*	Woodland, grassland and tall herbs	lower	habitat loss	slight adverse
	Ponds with potential for great crested newt	potentially medium	habitat loss and road kill	potentially moderate adverse
Spital Beck	White-clawed crayfish	medium	habitat loss	slight adverse
	Potential for otter	potentially medium	road kill	potentially moderate beneficial
	Potential for water vole	potentially medium	habitat loss	potentially moderate adverse
Tributary of Spital Beck	Potential for otter	potentially medium	road kill	potentially moderate beneficial
	Potential for water vole	potentially medium	habitat loss	potentially moderate adverse
	Potential for white-clawed crayfish	potentially medium	habitat loss	potentially moderate adverse

Site	Interest Feature	Scale (of importance)	Impact	Assessment
Mature trees along Tout Hill*	Potential bat roosts	potentially medium	potential loss of bat roosts	potentially moderate adverse
Semi-improved grassland at Shepherdfields Lane*	Semi-improved grassland	negligible	habitat loss	neutral
Gillylees Wood*	Semi-natural ancient woodland	medium	habitat loss	moderate adverse
Stone Cliffe Wood*	Semi-natural ancient woodland	lower	habitat loss	slight adverse
Cram Beck	Otter	medium	road kill	moderate beneficial
Grassland on the roadside verge north of Gillylees Wood*	Semi-improved grassland	lower	habitat loss	slight adverse
Trees and hedgerow at Hutton Hill*	Potential bat roosts	potentially medium	potential loss of bat roosts	potentially moderate adverse
New Plantation	Young re-planted broadleaved woodland	lower	habitat loss	neutral
Grassland at Hutton Hill roadside cutting*	Calcareous grassland	lower	habitat loss	slight adverse
Leyland's Hill and Trousdale Hill*	Semi-improved grassland, species-rich hedgerow and mature trees with potential as bat roosts	potentially medium	habitat loss	potentially moderate adverse
Small plantation between Firs Wood and Botterills Plantation	Potential bat roosts	potentially medium	habitat loss and potential loss of bat roosts	potentially moderate adverse
Botterills Plantation*	Mixed plantation woodland	lower	habitat loss	neutral
Trees and hedgerow east and south-west of Bar Farm*	Hedgerow and potential bat roosts	potentially medium	habitat and potential roost loss	potentially moderate adverse
River Derwent	Riparian species and habitats	very high	pollution	neutral
Other watercourses	Riparian species and habitats	lower	pollution	neutral
Cumulative impact on bats	flightlines, foraging areas and potential tree roosts	potentially medium	habitat and potential roost loss	potentially moderate adverse
Cumulative impact of hedgerow loss	hedgerows	lower	hedgerow loss	neutral
Badgers	direct impacts on setts	lower	potential loss of setts	unknown
	severance of home ranges	lower	potential severance	neutral
	road kills	lower	road kill	slight beneficial

Site	Interest Feature	Scale (of importance)	Impact	Assessment
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Table 2 - Section 1: Summary of ecological and nature conservation impacts
* indicates sites identified by RPS Clouston

6.10 Limitations and Assumptions of Section 1 from York Bypass (at A1237 Hopgrove junction) to Malton Bypass (at B1248 Musley Bank Junction)

This assessment is based entirely on a desktop study carried out in August 2004 and a Phase 1 Habitat Survey carried out by RPS Clouston in 1992. In particular information on species is restricted to existing records. Should the scheme proceed to the next stage of assessment then detailed surveys of badger, bats, otter, water vole, white-clawed crayfish and great crested newt will be required.

RPS Clouston's 1993 assessments of ecological importance have been used for non-designated sites, it is assumed that there has been no significant change in the ecological value of these sites.

Within the time frame it has not been possible to agree the mitigation proposals with the Highways Agency, therefore these measures are subject to modification and development.

6.11 Potential Further Mitigation of Section 1 from York Bypass (at A1237 Hopgrove junction) to Malton Bypass (at B1248 Musley Bank Junction)

The moderate adverse impact on the Gillylees and Pretty Woods SINC can only be mitigated by a realignment of the route to the east to avoid loss of woodland within this site of county ecological importance.

More extensive woodland planting outside the highway boundary would help to mitigate the loss of areas of semi-natural woodland lost to landtake.

Consideration could be given to the creation of heathland along verges and perhaps beyond the highway boundary where the route runs through sandy soil at King's Moor.

6.12 The Base Line Conditions of Section 2 On-line Route

6.12.1 The Base Line Conditions Section 2 On-line Route from Malton Bypass (at Brambling Fields) to Seamer Bypass (at Seamer Carr)

Unless otherwise stated all features, both habitats and species, are of lower ecological importance. The study corridor is described from west to east.

The study corridor runs along the southern side of the broad flat floodplain of the River Derwent, with the lower slopes of the Yorkshire Wolds present along the southern edge. The majority of the land is covered by large fields of arable and improved grassland. Species-poor hedgerows with occasional hedgerow trees form the boundaries of many of these fields. Drainage ditches are also a common feature of the landscape. Blocks of plantation woodland, both of mixed broadleaved and coniferous trees and solely of conifers are occasional, but locally extensive.

At the western end of the study corridor Settington Beck flows north across the corridor and there is a complex of ponds and woodland in a curve of the beck north of Beck House. Water vole have been recorded along the beck and it is likely that otter use the water course and ponds as they are frequent in the River Derwent catchment. It is also possible that great crested newt are present in the ponds. Otter, water vole and great crested newt are all of medium ecological importance.

Rillington Beck flows north across the corridor between Thorpe Bassett and Rillington. There is potential for both otter and water vole along this beck (medium ecological importance). South of Rillington plantation woodland is present along Rillington Beck (Outgang Plantation).

The parkland of Scampston Park has numerous veteran trees with potential importance for invertebrates of old wood and as bat roosts. Scampston Fish Ponds Site of Importance for Nature Conservation (medium ecological importance) comprises two artificial ponds within landscaped grounds which support marginal and aquatic vegetation, a variety of water birds and aquatic invertebrates and has potential for otter and water vole (medium ecological importance). The ponds are fed by a mill race, which is an offshoot of Wintringham Beck, which becomes Blakey Beck at the divergence and Scampston Beck where the mill race rejoins it. All these water courses have potential for otter and water vole (medium ecological importance). A mill pond is present adjacent to Scampston Mill Farm and areas of marshy grassland are found between here and Linton Mill. Several areas of plantation woodland are present south of Scampston, including Firs Plantation, Mill Plantation, Sands Wood, Lodge Plantation and Park Plantation. These areas mix of conifer and mixed plantations. Keld Beck runs along the side of Sands Wood and has potential for otter and water vole (medium ecological importance).

West Knapton Road Verge Site of Importance for Nature Conservation lies between Sands Wood and the A64 and includes the verges both sides of the road from Sandy Lane to the Knapton Wold Road. This site supports acid grassland on a sandy soil and is of medium ecological importance.

The grounds of Knapton Hall contain parkland trees with potential as bat roosts (medium ecological importance) and for invertebrates of old wood, and areas of plantation woodland. Several shelterbelts are present in the farmland between Knapton Hall and West Heslerton.

The grounds of Heslerton Hall has areas of plantation woodland, parkland trees with potential as bat roosts (medium ecological importance) and for invertebrates of old wood, and several ponds.

Ass Beck flows north across the study corridor to the A64, but is culverted north of the road. There is some minor potential for this beck to support otter and water vole (medium ecological importance). Several shelterbelts are present in the farmland between East Heslerton and Sherburn.

West and East Becks flow north through Sherburn and converge to form Sherburn Beck north of the village. Two mill ponds are present along East Beck to the south of the A64. Both the beck and ponds have potential for water vole and otter (medium ecological importance). A series of shelterbelts and small plantation woodlands are present between Sherburn and Ganton. Areas of plantation woodland are also present on Ganton Golf Course and in the grounds of Ganton Hall. The latter also has an area of parkland with mature trees with potential as bat roosts (medium ecological importance) and for invertebrates of old wood. The stream running through Ganton and Windle Beck both have potential for otter and water vole (medium ecological importance).

Several small plantations are present between Ganton and the Seamer bypass, including Railway Plantation, Catch Water Plantation, Robin's Bottom Plantation. The River Hertford flows north-east through the study corridor and is known to support both otter and water vole, as do the drains of Willerby and Staxton Carrs (medium ecological importance).

There is potential for great crested newt (medium ecological importance) to be present in any of the ponds within the study area.

There are records for badger and various bat species along the study corridor and these species are likely to be present throughout the corridor.

6.13 The Legislative Framework Section 2 On-line Route from Malton Bypass (at Brambling Fields) to Seamer Bypass (at Seamer Carr)

6.13.1 International designations

Ramsar Sites

Ramsar sites are designated as a wetland of international importance under the Convention of Wetland of International Importance 1971 Ramsar.

The UK Government has chosen to apply the same considerations for developments on Ramsar Sites as it does to SACs and SPAs (PPG9 Annex C para. 7.)

No Ramsar site is present within the study area.

6.13.2 European Designations

Special Areas of Conservation (SAC)

Special Areas of Conservation are designated under the EC Habitats and Species Directive 92/43/EEC. Where SACs have been submitted to the European Commission but have yet to be designated they are referred to as candidate SACs (cSACs). For the purpose of considering development proposals affecting them cSACs should be treated as if they had already been designated (PPG9 para 13.)

The River Derwent candidate Special Area of Conservation lies just outside the study area and all the watercourses flowing through the study corridor drain into this river (see Plan 6.1). This is designated for the presence of river lamprey *Lampetra fluviatilis*. In addition the following qualifying features are also present: Water courses of plain to montane levels with the *Ranunculus fluitantis* and *Callitriche-Batrachion* vegetation, sea lamprey *Petromyzon marinus*, bullhead *Cottus gobio* and otter *Lutra lutra*.

Special Protection Areas (SPA)

Special Protection Areas are designated under Article 4 of Directive 79/409/EEC on the Conservation of Wild Birds.

None present within the study area.

Protection of species under European law

Annex IV(a) of the EC Habitats Directive lists animal species which are in need of strict protection. Article 12 prohibits:

- all forms of deliberate capture or killing of specimens of these species in the wild;
- deliberate disturbance of these species, particularly during the period of breeding, rearing, hibernation and migration;
- deliberate destruction or taking of eggs from the wild;
- deterioration or destruction of breeding sites or resting places.

All bat species, great crested newt *Triturus cristatus* and otter *Lutra lutra* are listed on Annex IV.

6.14 National Designations

Sites of Special Scientific Interest (SSSI)

SSSIs are designated under the Wildlife and Countryside Act 1981. Planning authorities are required to consult English Nature before granting planning permission for the development of land in an SSSI. An authority is also required to consult English Nature where an application is for development which is likely to affect an SSSI, even if the application site falls outside the SSSI. PPG9 para 30.

The River Derwent Sites of Special Scientific Interest lies just outside the study area, its boundary is coincident with that for the River Derwent cSAC. The River Derwent is designated for its aquatic plant and invertebrate communities, riverine birds, fish and otter.

Protection of species under UK law

Section 9 of the Wildlife and Countryside Act 1981 protects animals listed in Schedule 5 of the Act from killing or taking and also protects nests and shelters used by these species and prohibits disturbance of these species in nests or shelters. Water vole receive limited protection under Schedule 5, in that it protects their places of shelter and protection but does not protect the voles themselves. Section 1 of the Act also provides for general protection of wild birds and their eggs and nests. Schedule 1 of the provides specific protection to selected bird species such that it is an offence to take, injure or kill these birds or to take, damage or

destroy its nest, eggs or young. It is also an offence to intentionally or recklessly disturb these birds close to their nest during the breeding season.

Badgers and their setts are protected under the Protection of Badgers Act 1992.

6.14.1 Regional and Local Designations

Local Nature Reserve (LNR)

LNRs are designated by local authorities under the National Parks and Access to the Countryside Act 1949. They contain examples of habitats of local significance and can make a useful contribution both to nature conservation and to the opportunities for the public to see, learn about, and enjoy wildlife.

None present within study area.

6.14.2 Non-statutory designations

Sites of Importance for Nature Conservation

These are sites of regional (North Yorkshire) importance. Whilst they have no legal status, they are adopted by local authorities, and policies concerning their protection are incorporated within local plans and structure plans.

Two Sites of Importance for Nature Conservation are present within the study corridor: Scampston Fish Ponds and West Knapton Road Verge.

The UK, Scarborough and Ryedale Biodiversity Action Plans (BAP)

Section 74 of the Countryside and Rights of Way Act 2000 requires the UK Government to produce a list of habitats and species which it considers are of principal importance for the conservation of biological diversity in England, in accordance with the 1992 UN Convention on Biological Diversity. It also creates a duty for the UK Government to take or promote the taking by others of steps to further the conservation of the listed habitats and species. The principal means of doing this is contained in the UK Biodiversity Action Plan which contains action plans for all the listed habitats and species.

The Ryedale and Scarborough BAPs are part of the delivery of the UK BAP at the local level. They contains action plans for species and habitats which are threatened in Ryedale and Scarborough.

TYPE OF DESIGNATION	NAME AND LOCATION OF SITE, (OR SPECIES NAME)	NOTES
INTERNATIONAL DESIGNATIONS		
	none present	
SPECIES PROTECTED BY INTERNATIONAL LAW		
	none present	
EUROPEAN DESIGNATIONS		
	none present	

TYPE OF DESIGNATION	NAME AND LOCATION OF SITE, (OR SPECIES NAME)	NOTES
SPECIES PROTECTED BY EUROPEAN LAW		
Habitats Directive	otter	also protected by Wildlife & Countryside Act
	great crested newt	also protected by Wildlife & Countryside Act
	bats (all species)	also protected by Wildlife & Countryside Act
NATIONAL DESIGNATIONS		
	none present	
SPECIES PROTECTED BY NATIONAL LAW		
Wildlife & Countryside Act	Water vole	
Protection of Badgers Act	Badger	
REGIONAL DESIGNATIONS		
	none	
LOCAL DESIGNATIONS		
	none	
NON-STATUTORY DESIGNATIONS		
Site of Importance for Nature Conservation	Scampston Fish Ponds	
	West Knapton Road Verge	
UK GOVERNMENT POLICY INITIATIVES		
Countryside and Rights of Way Act 2000 Section 74 and UK Biodiversity Action Plan	bats great crested newt water vole	only pipistrelle is covered by UK BAP

Table 3 Schedule of Designations within Section 2 On-line Route Study Area

6.15 Scheme Description of Section 2 On-line Route

6.15.1 Section 2 On-line Route from Malton Bypass (at Brambling Fields) to Seamer Bypass (at Seamer Carr)

The On-line Route diverges north from the existing A64 just east of Beck House to bypass Scagglethorpe, rejoining the existing road for a short section before diverging first north around Rillington Fields and then south of Rillington, Scampston and Knapton. East of

Knapton the road runs to the north of the existing A64 before crossing the existing road between West and East Heslerton. At Heslerton Grange the route rejoins the existing road for a kilometre or so before diverging to the south of Sherburn and then rejoining the existing road to Potter Brompton, where it runs to the south of Ganton. The road crosses the existing A64 at Binnington and follows the line of the York – Scarborough railway line, running just to its east to the start of the Seamer Bypass. There are junctions with minor roads at Scagglethorpe, west and east of Rillington, West Heslerton, Sherburn and Ganton.

6.16 Identification of Impacts of Section 2 On-line Route

6.16.1 Section 2 On-line Route from Malton Bypass (at Brambling Fields) to Seamer Bypass (at Seamer Carr)

Construction Impacts

There is potential for pollution of all watercourses and drains both adjacent to and crossed by the road during construction phase, either through sedimentation or contamination from chemical or oil spills. Particularly towards the western part of this section there is potential for this pollution to impact on the River Derwent cSAC into which all the watercourses within the study area drain. This could impact negatively on the fish, aquatic invertebrate and aquatic flora of the river. The route crosses the Mill Stream feeding Scampston Fish Ponds SINC less than 200m upstream and there is potential for pollution of these ponds during construction

The new road would cross Settrington Beck, Rillington Beck, the Mill Stream at Scampston, Blakey Beck, Keld Beck, Ass Beck, West Beck, East Beck, the stream running through Ganton, Windle Beck and the River Hertford, together with numerous drains. The crossing of these water courses will potentially lead to habitat loss for water vole and otter and disturbance of these animals.

The route runs close to a pond south-east of East Heslerton and two ponds south of Ganton, all with potential to host great crested newt and so could lead to habitat loss for this species if it is present.

The new road alignment cuts through woodland at Outgang Plantation, a shelterbelt south of Firs Plantation, Mill Plantation, Park Plantation, Sands Wood, a small plantation on Station Road, a shelterbelt east of Station Road, a shelterbelt south of Groom's Cottage, a plantation west of Gladvic Farm, a shelterbelt west of Potter Brompton, Daniel's Plantation, Westfield Plantation, Nursery Plantation, Snipe End Plantation and Railway Plantation, each resulting in the loss of an area of plantation woodland.

A number of mature trees with potential to host bat roosts may be felled as a result of the scheme, potentially leading to a net loss of bat roosts.

The route will result in loss of sections of hedgerow along its entire length.

Operational Impacts

The River Hertford and drains on Willerby Carr and Billington Carr are known to be used by otter and, with currently increasing otter population in the Derwent valley, it is likely that other watercourses crossed by the On-line Route are used by otter either now or will be in the near future. Without appropriate mitigation measures at these crossing points there is a potential for otters to stray on to the carriageway and be killed by vehicles. This is

particularly likely during flood conditions when culverts could become filled with water, forcing otters to find an alternative means of crossing the road.

There is potential for pollution of the watercourses crossed by the new road, and consequently the River Derwent cSAC and Scampston Ponds SINC, from tanker spillages as a result of road traffic accidents and during road maintenance. See also Water Quality Chapter.

The route runs close to three ponds which could hold populations of great crested newt. If newts are present in these ponds there is a possibility of newts straying onto the new carriageway and being killed by vehicles unless measures are taken to prevent newts gaining access to the carriageway. These ponds could also suffer from similar pollution incidents to those described above for watercourses, threatening any newt populations present.

Where the route cuts through significant hedgerows and through areas of linear woodland there is potential for there to be significant disruption of bat flightlines where these landscape features are used by bats. Although there are no records for brown hare within the study corridor it is possible that they are present where this is so there could be severance of their home ranges and a reduction in the area of land available to hare and potential for increased roadkill.

As badger are present along the study corridor it is possible that the Off Line Route will cut across a number of home ranges and could potentially result in an increase in the number of badger roadkills.

6.17 Possible Mitigation Measures of Section 2 On-line Route

6.17.1 Section 2 On-line Route from Malton Bypass (at Brambling Fields) to Seamer Bypass (at Seamer Carr)

Construction Impacts

See Water Quality chapter 17 for details of mitigation of potential construction phase pollution of watercourses and ponds. These will include pollution control measures agreed by the Environment Agency designed to prevent any pollution of watercourses and ponds.

Loss of woodland and hedgerows can be partly mitigated by the planting of hedgerows along the road boundary and planting of native broadleaved woodland on embankments and cuttings (see Landscape chapter for details).

Trees identified as potential bat roosts which will be felled will be examined prior to felling and exclusion measures taken if required. Where trees used as bat roosts are felled, bat boxes will be erected on other trees or suitable structures in the vicinity.

Any badgers living in setts within the land take of the proposed road will need to be moved before construction starts.

If great crested newts are found in any of the ponds along the route following field survey then newt fencing will be erected along the boundary of the construction site to prevent newts entering the site.

Operational Impacts

Due to the high likelihood that otter use the majority of watercourses along the route all bridges and stream and drain culverts will be constructed in a manner which will allow otters

to cross under the new road whilst these streams and drains are in flood. This will either entail an otter tunnel close to the stream but above the flood level, or an oversized culvert with ledges above the level of flood flows for otters to use. Badgers will also be able to use these road crossings. Fencing will direct both otters and badgers to the entrances of these tunnels. The design of all river and stream crossings will follow the guidance given in DMRB Volume 10 Section 4 Part 4 HA 81/99.

To reduce the likelihood of road kills, badger fencing will be installed along the entire length of the new road at the back of the verges. A number of badger tunnels will be provided in appropriate locations to allow badgers to cross the road. Badgers will also be able to use otter passages and farm accesses.

If great crested newts are found in any of the ponds along the route following field survey then newt fencing will be erected along the highway boundary to prevent newts venturing onto the carriageway.

See Water Quality chapter for mitigation of potential operational phase pollution of watercourses. These will include measures to contain any spillage of pollutants and prevent any pollution of watercourses including the River Derwent cSAC and Scampston Ponds SINC.

6.18 Impact Assessment of Section 2 On-line Route

6.18.1 Section 2 On-line Route from Malton Bypass (at Brambling Fields) to Seamer Bypass (at Seamer Carr)

Construction Impacts

The agreed mitigation measures for water quality should ensure that there is no pollution of any water course, including the River Derwent and Scampston Fish Ponds SINC, during the construction phase, so that the ecological impact will be neutral.

The hedgerow planting proposed as part of the landscaping scheme should fully mitigate against the loss of hedgerows. In most cases the newly planted hedges will contain a similar or greater diversity of shrub species to that in the hedgerows which are removed. As such the ecological impact on hedgerows will be neutral. Loss of plantation woodland, both coniferous and broadleaved can also be mitigated by woodland planting on embankments and in redundant field corners. This will result in a neutral impact from the loss of the various plantations affected.

This route will potentially result in the loss of a number of trees with high potential as bat roosts, though further scheme development is required to fully assess this impact. Trees need to be of a considerable age before they have the structural complexity to be of high bat roost potential, at least 50 and often over 100 years of age. Consequently the loss of these trees will not be fully mitigated by the tree planting schemes incorporated in the mitigation measures for 50 to 100 years post construction, so the ecological impact of the loss of these trees will potentially be slight adverse.

Provided that construction is restricted to normal working hours there should be no disturbance of otters using water courses crossed by the route, so the impact will be neutral.

Field survey is required to ascertain whether any badger setts will be directly affected by the scheme. Likewise field survey is required to ascertain whether water vole are present on watercourses and great crested newt in ponds. It is therefore not possible to fully assess the

ecological impacts of this scheme on these species. However Table 2 gives predicted impacts on these species should they be present for each watercourse and pond. At Settington Beck, although water vole are recorded on the beck it is not known whether they are present in the vicinity of the road crossing. In the case of great crested newts the erection of newt fencing should prevent newts being killed by construction vehicles or road traffic, so any impacts of the scheme on newts will be limited to issues of habitat loss.

Operational Impacts

Mitigation measures for otters using watercourses crossed by the road should prevent roadkill of this species and allow them to continue travelling along the watercourses. This will have a moderate beneficial impact where the route runs along the line of the existing A64 at Settington Beck, as there are currently no provisions for otter crossing here, and a neutral impact on other watercourses where the route runs off-line.

The mitigation measures for water quality should ensure that there is no pollution of any water course, including the River Derwent and Scampston Fish Ponds SINC, during operation, so that the ecological impact will be neutral.

Provision of badger tunnels and passages which both otters and badgers can use, together with badger fencing along the entire route should prevent roadkill and maintain badger routes, resulting in a neutral ecological impact.

It is not possible to assess the impact of the route on bat flightlines in the absence of field survey.

As with construction impacts, the erection of newt fencing should prevent great crested newts being killed by road traffic should field survey establish that they are present in any of the ponds along the route. As such the potential operational impact on great crested newts would be neutral.

Severance of home ranges of badgers or other mammals, for example brown hare, could be significant where the route runs through farmland away from the existing road, however the provision of badger and otter tunnels and farm accesses should minimise the impact on hare and badger to give a neutral impact.

6.19 Summary of Section 2 On-line Route

6.19.1 Section 2 On-line Route from Malton Bypass (at Brambling Fields) to Seamer Bypass (at Seamer Carr)

Table 4 summarises the ecological impacts of the scheme taking into account the proposed mitigation measures. The impact of the On-line Route is likely to be moderate adverse, based on potential impacts to water vole, great crested newts and bat roosts in mature trees, however further field survey and scheme development is required to confirm this assessment.

There will be no impacts on the River Derwent cSAC.

Site	Interest Feature	Scale (of importance)	Impact	Assessment
Settingham Beck	Potential for otter	potentially medium	road kill	potentially moderate beneficial

Site	Interest Feature	Scale (of importance)	Impact	Assessment
	Potential for water vole	potentially medium	habitat loss	potentially moderate adverse
Outgang Plantation	Plantation woodland	lower	habitat loss	neutral
Rillington Beck	Potential for otter	potentially medium	road kill	potentially neutral
	Potential for water vole	potentially medium	habitat loss	potentially moderate adverse
Shelterbelt south of Firs Plantation	Plantation woodland	lower	habitat loss	neutral
Mill Plantation	Plantation woodland	lower	habitat loss	neutral
Mill Stream at Scampston	Potential for otter	potentially medium	road kill	potentially neutral
	Potential for water vole	potentially medium	habitat loss	potentially moderate adverse
Scampston Fish Ponds SINC	Aquatic vegetation and fauna	medium	pollution	neutral
Blakey Beck	Potential for otter	potentially medium	road kill	potentially neutral
	Potential for water vole	potentially medium	habitat loss	potentially slight adverse
Park Plantation	Plantation woodland	lower	habitat loss	neutral
Sands Wood	Plantation woodland	lower	habitat loss	neutral
Keld Beck	Potential for otter	potentially medium	road kill	potentially neutral
	Potential for water vole	potentially medium	habitat loss	potentially moderate adverse
plantation on Station Road	Plantation woodland	lower	habitat loss	neutral
shelterbelt east of Station Road	Plantation woodland	lower	habitat loss	neutral
Ass Beck	Potential for otter	potentially medium	road kill	potentially neutral
	Potential for water vole	potentially medium	habitat loss	potentially moderate adverse
Pond south of East Heslerton	Potential for great crested newts	potentially medium	habitat loss and road kill	potentially moderate adverse
shelterbelt south of Groom's Cottage	Plantation woodland	lower	habitat loss	neutral
West Beck	Potential for otter	potentially medium	road kill	potentially neutral
	Potential for water vole	potentially medium	habitat loss	potentially moderate adverse
East Beck	Potential for otter	potentially medium	road kill	potentially neutral

Site	Interest Feature	Scale (of importance)	Impact	Assessment
	Potential for water vole	potentially medium	habitat loss	potentially moderate adverse
plantation west of Gladvic Farm	Plantation woodland	lower	habitat loss	neutral
shelterbelt west of Potter Brompton	Plantation woodland	lower	habitat loss	neutral
Daniel's Plantation	Plantation woodland	lower	habitat loss	neutral
Westfield Plantation	Plantation woodland	lower	habitat loss	neutral
pond south of Ganton 1	Potential for great crested newts	potentially medium	habitat loss and road kill	potentially moderate adverse
Nursery Plantation	Plantation woodland	lower	habitat loss	neutral
stream at Ganton	Potential for otter	potentially medium	road kill	potentially neutral
	Potential for water vole	potentially medium	habitat loss	potentially moderate adverse
pond south of Ganton 2	Potential for great crested newts	potentially medium	habitat loss and road kill	potentially moderate adverse
Windle Beck	Potential for otter	potentially medium	road kill	potentially neutral
	Potential for water vole	potentially medium	habitat loss	potentially moderate adverse
Snipe End Plantation	Plantation woodland	lower	habitat loss	neutral
River Hertford	Otter	medium	road kill	neutral
	Water vole	medium	habitat loss	potentially moderate adverse
Railway Plantation	Plantation woodland	lower	habitat loss	neutral
Drains all along route	Potential for otter	potentially medium	road kill	potentially neutral
	Potential for water vole	potentially medium	habitat loss	potentially slight adverse
River Derwent	Riparian species and habitats	very high	pollution	neutral
Other watercourses	Riparian species and habitats	lower	pollution	neutral
Cumulative impact on bats	Flightlines, foraging areas and potential tree roosts	potentially medium	habitat and potential roost loss	potentially moderate adverse
Cumulative impact of hedgerow loss	Hedgerows	lower	hedgerow loss	neutral
Brown hare	Severance of home ranges	lower	potential severance	neutral
Badgers	Direct impacts on setts	lower	potential loss of setts	unknown
	Severance of home ranges	lower	potential severance	neutral

Site	Interest Feature	Scale (of importance)	Impact	Assessment
	Road kills	lower	road kill	neutral

Table 4 - Section 2 On-line Route: Summary of ecological and nature conservation impacts

6.20 Limitations and Assumptions of Section 2 On-line Route from Malton Bypass (at Brambling Fields) to Seamer Bypass (at Seamer Carr)

This assessment is based entirely on a desktop study carried out in November 2004. In particular information on species is restricted to existing records. Should the scheme proceed to the next stage of assessment then detailed surveys of badger, bats, otter, water vole and great crested newt will be required.

Within the time frame it has not been possible to agree the mitigation proposals with the Highways Agency, therefore these measures are subject to modification and development.

6.21 Potential Further Mitigation of Section 2 On-line Route from Malton Bypass (at Brambling Fields) to Seamer Bypass (at Seamer Carr)

None suggested.

6.22 The Base Line Conditions of Section 2 Off Line Route

6.22.1 The Base Line Conditions Section 2 Off Line Route from Malton Bypass (at Brambling Fields) to Seamer Bypass (at Seamer Carr)

Unless otherwise stated all features, both habitats and species, are of lower ecological importance. The study corridor is described from west to east.

The study corridor runs along the southern side of the broad flat floodplain of the River Derwent, with the lower slopes of the Yorkshire Wolds present along the southern edge. The majority of the land is covered by large fields of arable and improved grassland. Species-poor hedgerows with occasional hedgerow trees form the boundaries of many of these fields. Drainage ditches are also a common feature of the landscape. Blocks of plantation woodland, both of mixed broadleaved and coniferous trees and solely of conifers are occasional, but locally extensive.

At its western end the study corridor includes a section of the River Derwent which is designated as a candidate Special Area of Conservation and is of very high ecological importance. Just east of this Setlington Beck flows north across the corridor and there is a complex of ponds and woodland in a curve of the beck north of Beck House. Water vole have been recorded along the beck and it is likely that otter use the water course and ponds as they are frequent in the River Derwent catchment. There is also a possibility that great crested newt are present in the ponds. These species are all of medium ecological importance.

The many drains running through the farmland between Beck House and Rillington all have potential for otter and water vole to be present (medium ecological importance), as do Rillington Beck, West Moor Drain, Blakey Beck and the outfall of the Scampston Hall fish ponds which merge to form Scampston Beck and Keld Beck. Several areas of plantation woodland are present between Beck House and Knapton, including Scagglethorpe Bogs, Ruston Plantation, Hawk Plantation, Edge Plantation, American Plantation, Home Wood and areas of plantation woodland around Scampston Hall. These area mix of conifer and mixed plantations.

Several shelterbelts are present in the farmland between Knapton and Sherburn, including Middle Oche, West Ochre, East Ochre and The Belts. This farmland also has numerous drains which could support otter and water vole, as could Ellis Beck. In addition several large ponds are present on East Heselton Carr which could potentially host great crested newt (medium ecological importance), though this species is not recorded from this part of the Derwent valley, so the likelihood is low.

East Beck, which becomes Sherburn Beck flows north through Sherburn and west across Sherburn Carr. This beck has potential for water vole and otter (medium ecological importance), as do Sherburn Mere, the stream running through Ganton and Windle Beck. A series of shelterbelts and small plantation woodlands are present between Sherburn and Ganton, including Potter Brompton Plantation, Stockdove Plantation, Glebe Plantation, Long Plantation and the larger Pheasant Covert. Areas of plantation woodland are also present on Ganton Golf Course. A flight pond in Pheasant Covert and two ponds near Long Plantation could potentially host great crested newt (medium ecological importance).

Several small plantations are present between Ganton and the Seamer bypass, including Railway Plantation, Catch Water Plantation, Robin's Bottom Plantation. The River Hertford flows north-east through the study corridor and is known to support both otter and water vole

(medium ecological importance), as do the drains of Willerby and Staxton Carrs and the area around Binnington.

There are records for badger and various bat species along the study corridor and these species are likely to be present throughout the corridor. Feature of importance for bats, such as mature trees which could host roosts, are of medium ecological importance.

6.23 The Legislative Framework Section 2 Off Line Route from Malton Bypass (at Brambling Fields) to Seamer Bypass (at Seamer Carr)

6.23.1 International designations

Ramsar Sites

Ramsar sites are designated as a wetland of international importance under the Convention of Wetland of International Importance 1971 Ramsar.

The UK Government has chosen to apply the same considerations for developments on Ramsar Sites as it does to SACs and SPAs (PPG9 Annex C para. 7.)

No Ramsar site is present within the study area.

6.23.2 European Designations

Special Areas of Conservation (SAC)

Special Areas of Conservation are designated under the EC Habitats and Species Directive 92/43/EEC. Where SACs have been submitted to the European Commission but have yet to be designated they are referred to as candidate SACs (cSACs). For the purpose of considering development proposals affecting them cSACs should be treated as if they had already been designated (PPG9 para 13.)

The River Derwent candidate Special Area of Conservation lies within the study area (see Plan 6.1). This is designated for the presence of river lamprey *Lampetra fluviatilis*. In addition the following qualifying features are also present: Water courses of plain to montane levels with the *Ranunculion fluitantis* and *Callitriche-Batrachion* vegetation, sea lamprey *Petromyzon marinus*, bullhead *Cottus gobio* and otter *Lutra lutra*.

Special Protection Areas (SPA)

Special Protection Areas are designated under Article 4 of Directive 79/409/EEC on the Conservation of Wild Birds.

None present within the study area.

Protection of species under European law

Annex IV(a) of the EC Habitats Directive lists animal species which are in need of strict protection. Article 12 prohibits:

- all forms of deliberate capture or killing of specimens of these species in the wild;
- deliberate disturbance of these species, particularly during the period of breeding, rearing, hibernation and migration;
- deliberate destruction or taking of eggs from the wild;

- deterioration or destruction of breeding sites or resting places.

All bat species, great crested newt *Triturus cristatus* and otter *Lutra lutra* are listed on Annex IV.

6.23.3 National Designations

Sites of Special Scientific Interest (SSSI)

SSSIs are designated under the Wildlife and Countryside Act 1981. Planning authorities are required to consult English Nature before granting planning permission for the development of land in an SSSI. An authority is also required to consult English Nature where an application is for development which is likely to affect an SSSI, even if the application site falls outside the SSSI. PPG9 para 30.

The River Derwent Sites of Special Scientific Interest lies within the study area. The River Derwent is designated for its aquatic plant and invertebrate communities, riverine birds, fish and otter.

Protection of species under UK law

Section 9 of the Wildlife and Countryside Act 1981 protects animals listed in Schedule 5 of the Act from killing or taking and also protects nests and shelters used by these species and prohibits disturbance of these species in nests or shelters. Water vole receive limited protection under Schedule 5, in that it protects their places of shelter and protection but does not protect the voles themselves. Section 1 of the Act also provides for general protection of wild birds and their eggs and nests. Schedule 1 of the provides specific protection to selected bird species such that it is an offence to take, injure or kill these birds or to take, damage or destroy its nest, eggs or young. It is also an offence to intentionally or recklessly disturb these birds close to their nest during the breeding season.

Badgers and their setts are protected under the Protection of Badgers Act 1992.

6.23.4 Regional and Local Designations

Local Nature Reserve (LNR)

LNRs are designated by local authorities under the National Parks and Access to the Countryside Act 1949. They contain examples of habitats of local significance and can make a useful contribution both to nature conservation and to the opportunities for the public to see, learn about, and enjoy wildlife.

None present within study area.

6.23.5 Non-statutory designations

Sites of Importance for Nature Conservation

These are sites of regional (North Yorkshire) importance. Whilst they have no legal status, they are adopted by local authorities, and policies concerning their protection are incorporated within local plans and structure plans.

None present within study area.

The UK, Scarborough and Ryedale Biodiversity Action Plans (BAP)

Section 74 of the Countryside and Rights of Way Act 2000 requires the UK Government to produce a list of habitats and species which it considers are of principal importance for the conservation of biological diversity in England, in accordance with the 1992 UN Convention on Biological Diversity. It also creates a duty for the UK Government to take or promote the taking by others of steps to further the conservation of the listed habitats and species. The principal means of doing this is contained in the UK Biodiversity Action Plan which contains action plans for all the listed habitats and species.

The Ryedale and Scarborough BAPs are part of the delivery of the UK BAP at the local level. They contains action plans for species and habitats which are threatened in Ryedale and Scarborough.

TYPE OF DESIGNATION	NAME AND LOCATION OF SITE, (OR SPECIES NAME)	NOTES
INTERNATIONAL DESIGNATIONS		
	none present	
SPECIES PROTECTED BY INTERNATIONAL LAW		
	none present	
EUROPEAN DESIGNATIONS		
candidate Special Area of Conservation	River Derwent	
SPECIES PROTECTED BY EUROPEAN LAW		
Habitats Directive	otter	also protected by Wildlife & Countryside Act
Habitats Directive	great crested newt	also protected by Wildlife & Countryside Act
Habitats Directive	bats (all species)	also protected by Wildlife & Countryside Act
NATIONAL DESIGNATIONS		
Wildlife & Countryside Act	River Derwent SSSI	
SPECIES PROTECTED BY NATIONAL LAW		
Wildlife & Countryside Act	Water vole	
Protection of Badgers Act	Badger	
REGIONAL DESIGNATIONS		
	none	
LOCAL DESIGNATIONS		
	none	

TYPE OF DESIGNATION	NAME AND LOCATION OF SITE, (OR SPECIES NAME)	NOTES
NON-STATUTORY DESIGNATIONS		
	none	
UK GOVERNMENT POLICY INITIATIVES		
Countryside and Rights of Way Act 2000 Section 74 and UK Biodiversity Action Plan	bats great crested newt water vole	only pipistrelle is covered by UK BAP

Table 5 Schedule of Designations within Section 2 Off Line Route Study Area

6.24 Scheme Description of Section 2 Off Line Route

6.24.1 Section 2 Off Line Route from Malton Bypass (at Brambling Fields) to Seamer Bypass (at Seamer Carr)

The Off Line Route leaves the line of the existing A64 just west of the Brambling Fields junction and runs just north of Beck House, crossing Settrington Beck, before heading north towards the York – Scarborough railway line. The route runs follows the line of the railway, running alongside it just to the south from Scagglethorpe Grange to the start of the Seamer Bypass, with a few minor diversions south avoid features such as the Effluent Works and Electricity Generating Station. There are junctions at West Knapton, Sherburn and Binnington.

6.25 Identification of Impacts of Section 2 Off Line Route

6.25.1 Section 2 Off Line Route from Malton Bypass (at Brambling Fields) to Seamer Bypass (at Seamer Carr)

Construction Impacts

There is potential for pollution of all watercourses and drains both adjacent to and crossed by the road during construction phase, either through sedimentation or contamination from chemical or oil spills. Particularly towards the western part of this section there is potential for this pollution to impact on the River Derwent cSAC into which all the watercourses within the study area drain. This could impact negatively on the fish, aquatic invertebrate and aquatic flora of the river.

The new road would cross Settrington Beck, Rillington Beck, Scampston Beck, Sherburn Beck, Sherburn Mere, the stream running through Ganton and Windle Beck and the River Hertford, together with numerous drains. The crossing of these water courses will potentially lead to habitat loss for water vole and otter and disturbance of these animals.

At Beck House and Pheasant Covert the route runs close to ponds with potential to host great crested newt and so could lead to habitat loss for this species if it is present.

The new road alignment cuts through woodland at Beck House, a shelterbelt south of High Gate House, a plantation alongside Scampston Beck, The Belts at East Knapton, a shelter belt on Station Road, an unnamed plantation north of Sherburn Beck, Pheasant Covert, a plantation

near Long Plantation north-east of Ganton, a plantation at Ganton Station, Snipe End Plantation and Railway Plantation, each resulting in the loss of an area of plantation woodland.

A number of mature trees with potential to host bat roosts may be felled as a result of the scheme, potentially leading to a net loss of bat roosts.

The route will result in loss of sections of hedgerow along its entire length.

Operational Impacts

The River Hertford and drains on Willerby Carr and Billington Carr are known to be used by otter and, with currently increasing otter population in the Derwent valley, it is likely that other watercourses crossed by the Off Line Route are used by otter either now or will be in the near future. Without appropriate mitigation measures at these crossing points there is a potential for otters to stray on to the carriageway and be killed by vehicles. This is particularly likely during flood conditions when culverts could become filled with water, forcing otters to find an alternative means of crossing the road.

There is potential for pollution of the watercourses crossed by the new road, and consequently the River Derwent cSAC, from tanker spillages as a result of road traffic accidents and during road maintenance. See also Water Quality Chapter.

The runs close to two ponds which could hold populations of great crested newt. If newts are present in these ponds there is a possibility of newts straying onto the new carriageway and being killed by vehicles unless measures are taken to prevent newts gaining access to the carriageway. These ponds could also suffer from similar pollution incidents to those described above for watercourses, threatening any newt populations present.

Where the route cuts through significant hedgerows and through areas of linear woodland there is potential for there to be significant disruption of bat flightlines where these landscape features are used by bats. Although there are no records for brown hare within the study corridor it is possible that they are present where this is so there could be severance of their home ranges and a reduction in the area of land available to hare and potential for increased roadkill. This however is only likely to be significant at the western end of the route, as elsewhere the new road will run close to the York – Scarborough railway line which already acts as a barrier to the movement of hare and other animals.

As badger are present along the study corridor it is possible that the Off Line Route will cut across a number of home ranges and could potentially result in an increase in the number of badger roadkills.

6.26 Possible Mitigation Measures of Section 2 Off Line Route

6.26.1 Section 2 Off Line Route from Malton Bypass (at Brambling Fields) to Seamer Bypass (at Seamer Carr)

Construction Impacts

See Water Quality chapter for details of mitigation of potential construction phase pollution of watercourses and ponds. These will include pollution control measures agreed by the Environment Agency designed to prevent any pollution of watercourses and ponds.

Loss of woodland and hedgerows can be partly mitigated by the planting of hedgerows along the road boundary and planting of native broadleaved woodland on embankments and cuttings (see Landscape chapter for details).

Trees identified as potential bat roosts which will be felled will be examined prior to felling and exclusion measures taken if required. Where trees used as bat roosts are felled, bat boxes will be erected on other trees or suitable structures in the vicinity.

Any badgers living in setts within the land take of the proposed road will need to be moved before construction starts.

If great crested newts are found in any of the ponds along the route following field survey then newt fencing will be erected along the boundary of the construction site to prevent newts entering the site.

Operational Impacts

Due to the high likelihood that otter use the majority of watercourses along the route all bridges and stream and drain culverts will be constructed in a manner which will allow otters to cross under the new road whilst these streams and drains are in flood. This will either entail an otter tunnel close to the stream but above the flood level, or an oversized culvert with ledges above the level of flood flows for otters to use. Badgers will also be able to use these road crossings. Fencing will direct both otters and badgers to the entrances of these tunnels. The design of all river and stream crossings will follow the guidance given in DMRB Volume 10 Section 4 Part 4 HA 81/99.

To reduce the likelihood of road kills, badger fencing will be installed along the entire length of the new road at the back of the verges. A number of badger tunnels will be provided in appropriate locations to allow badgers to cross the road. Badgers will also be able to use otter passages and farm accesses.

If great crested newts are found in any of the ponds along the route following field survey then newt fencing will be erected along the highway boundary to prevent newts venturing onto the carriageway.

See Water Quality chapter for mitigation of potential operational phase pollution of watercourses. These will include measures to contain any spillage of pollutants and prevent any pollution of watercourses including the River Derwent cSAC.

6.27 Impact Assessment of Section 2 Off Line Route

6.27.1 Section 2 Off Line Route from Malton Bypass (at Brambling Fields) to Seamer Bypass (at Seamer Carr)

Construction Impacts

The mitigation measures for water quality should ensure that there is no pollution of any water course, including the River Derwent, during the construction phase, so that the ecological impact will be neutral.

The hedgerow planting proposed as part of the landscaping scheme should fully mitigate against the loss of hedgerows. In most cases the newly planted hedges will contain a similar or greater diversity of shrub species to that in the hedgerows which are removed. As such the ecological impact on hedgerows will be neutral. Loss of plantation woodland, both coniferous

and broadleaved can also be mitigated by woodland planting on embankments and in redundant field corners. This will result in a neutral impact from the loss of the various plantations affected.

This route will potentially result in the loss of a number of trees with high potential as bat roosts, though further scheme development is required to fully assess this impact. Trees need to be of a considerable age before they have the structural complexity to be of high bat roost potential, at least 50 and often over 100 years of age. Consequently the loss of these trees will not be fully mitigated by the tree planting schemes incorporated in the mitigation measures for 50 to 100 years post construction, so the ecological impact of the loss of these trees will potentially be moderate adverse.

Provided that construction is restricted to normal working hours there should be no disturbance of otters using water courses crossed by the route, so the impact will be neutral.

Field survey is required to ascertain whether any badger setts will be directly affected by the scheme. Likewise field survey is required to ascertain whether water vole are present on watercourses and great crested newt in ponds. It is therefore not possible to fully assess the ecological impacts of this scheme on these species. However Table 2 gives predicted impacts on these species should they be present for each watercourse and pond. In the case of great crested newts the erection of newt fencing should prevent newts being killed by construction vehicles or road traffic, so any impacts of the scheme on newts will be limited to issues of habitat loss.

Operational Impacts

Mitigation measures for otters using watercourses crossed by the road should prevent roadkill of this species and allow them to continue travelling along the watercourses, so the impact will be neutral.

The agreed mitigation measures for water quality should ensure that there is no pollution of any water course, including the River Derwent, during operation, so that the ecological impact will be neutral.

Provision of badger tunnels and passages which both otters and badgers can use, together with badger fencing along the entire route should prevent roadkill and maintain badger routes, resulting in a neutral ecological impact.

It is not possible to assess the impact of the route on bat flightlines in the absence of field survey.

As with construction impacts, the erection of newt fencing should prevent great crested newts being killed by road traffic should field survey establish that they are present in any of the ponds along the route. As such the potential operational impact on great crested newts would be neutral.

Severance of home ranges of badgers or other mammals, for example brown hare, is unlikely to be significant as most of the route follows the York – Scarborough railway line which already acts as a barrier to species movements. At the west end of the route where severance is most likely the provision of badger and otter tunnels and farm accesses should minimise the impact on hare and badger to give a neutral impact.

6.28 Summary of Section 2 Off Line Route

6.28.1 Section 2 Off Line Route from Malton Bypass (at Brambling Fields) to Seamer Bypass (at Seamer Carr)

Table 6 summarises the ecological impacts of the scheme taking into account the proposed mitigation measures. The impact of the Off Line Route is likely to be moderate adverse, based on potential impacts to water vole, great crested newts and bat roosts in mature trees, however further field survey and scheme development is required to confirm this assessment.

There will be no impacts on the River Derwent cSAC.

Site	Interest Feature	Scale (of importance)	Impact	Assessment
Settingham Beck	Potential for otter	potentially medium	road kill	potentially neutral
	Potential for water vole	potentially medium	habitat loss	potentially moderate adverse
Beck House	Plantation woodland	lower	habitat loss	neutral
	Potential for great crested newts	potentially medium	habitat loss and road kill	potentially moderate adverse
Rillington Beck	Potential for otter	potentially medium	road kill	potentially neutral
	Potential for water vole	potentially medium	habitat loss	potentially moderate adverse
High Gate House shelterbelt	Plantation woodland	lower	habitat loss	neutral
Scampston Beck plantation	Plantation woodland	lower	habitat loss	neutral
Scampston Beck	Potential for otter	potentially medium	road kill	potentially neutral
	Potential for water vole	potentially medium	habitat loss	potentially moderate adverse
The Belts	Plantation woodland	lower	habitat loss	neutral
Station Road shelterbelt	Plantation woodland	lower	habitat loss	neutral
Sherburn Beck	Potential for otter	potentially medium	road kill	potentially neutral
	Potential for water vole	potentially medium	habitat loss	potentially moderate adverse
plantation north of Sherburn Beck	Plantation woodland	lower	habitat loss	neutral
Sherburn Mere	Potential for otter	potentially medium	road kill	potentially neutral
	Potential for water vole	potentially medium	habitat loss	potentially moderate adverse
Pheasant Covet	Plantation woodland	lower	habitat loss	neutral
plantation east of Long Plantation	Potential for great crested newts	potentially medium	habitat loss and road kill	potentially moderate adverse
	Plantation woodland	lower	habitat loss	neutral

Site	Interest Feature	Scale (of importance)	Impact	Assessment
stream at Ganton	Potential for otter	potentially medium	road kill	potentially neutral
	Potential for water vole	potentially medium	habitat loss	potentially moderate adverse
Windle Beck	Potential for otter	potentially medium	road kill	potentially neutral
	Potential for water vole	potentially medium	habitat loss	potentially moderate adverse
Snipe End Plantation	Plantation woodland	lower	habitat loss	neutral
River Hertford	Otter	medium	road kill	neutral
	Water vole	medium	habitat loss	potentially moderate adverse
Railway Plantation	Plantation woodland	lower	habitat loss	neutral
Drains all along route	Potential for otter	potentially medium	road kill	potentially neutral
	Potential for water vole	potentially medium	habitat loss	potentially moderate adverse
River Derwent	Riparian species and habitats	very high	pollution	neutral
Other watercourses	Riparian species and habitats	lower	pollution	neutral
Cumulative impact on bats	Flightlines, foraging areas and potential tree roosts	potentially medium	habitat and potential roost loss	potentially moderate adverse
Cumulative impact of hedgerow loss	Hedgerows	lower	hedgerow loss	neutral
Brown hare	Severance of home ranges	lower	potential severance	neutral
Badgers	Direct impacts on setts	lower	potential loss of setts	unknown
	Severance of home ranges	lower	potential severance	neutral
	Road kills	lower	road kill	neutral

Table 6 - Section 2 Off Line Route: Summary of ecological and nature conservation impacts

6.28.2 Limitations and Assumptions of Section 2 Off Line Route from Malton Bypass (at Brambling Fields) to Seamer Bypass (at Seamer Carr)

This assessment is based entirely on a desktop study carried out in November 2004. In particular information on species is restricted to existing records. Should the scheme proceed to the next stage of assessment then detailed surveys of badger, bats, otter, water vole and great crested newt will be required.

Within the time frame it has not been possible to agree the mitigation proposals with the Highways Agency, therefore these measures are subject to modification and development.

6.29 Potential Further Mitigation of Section 2 Off Line Route from Malton Bypass (at Brambling Fields) to Seamer Bypass (at Seamer Carr)

None suggested.

6.30 Overall Summary

6.30.1 Section 1 with Section 2 On-line Route

Overall the scheme is assessed as having a moderate adverse ecological impact due to the loss of ancient woodland of county importance within the Gillylees and Pretty Woods Site of Importance for Nature Conservation and potential moderate adverse impacts on white-clawed crayfish, water vole, great crested newts and bat roosts in mature trees, however field survey is required to confirm impacts on bats, white-clawed crayfish, otter, water vole and great crested newt.

There will be no impacts on the River Derwent cSAC, Kirkham Park and Riverside SSSI or Mount Pleasant Quarry SSSI.

6.30.2 Section 1 with Section 2 Off Line Route

Overall the scheme is assessed as having a moderate adverse ecological impact due to the loss of ancient woodland of county importance within the Gillylees and Pretty Woods Site of Importance for Nature Conservation and potential moderate adverse impacts on white-clawed crayfish, water vole, great crested newts and bat roosts in mature trees, however field survey is required to confirm impacts on bats, white-clawed crayfish, otter, water vole and great crested newt.

There will be no impacts on the River Derwent cSAC, Kirkham Park and Riverside SSSI or Mount Pleasant Quarry SSSI.

7 LANDSCAPE CHARACTER

7.1 Introduction

The assessment of Landscape Effects is divided into two main parts. Firstly, there is an assessment of impacts on the landscape character, which is contained in this chapter (impact on the component features, perceptual characteristics and values of the landscape by the junction improvements).

The second part is visual impact, assessed separately to this landscape character assessment, detailed in chapter 8. It related to the way in which views from properties and community facilities would be affected by the proposals.

In this section, the landscape character of the study area is considered, along a study area of a 1km radius around the broadly defined route corridor. The study specifically assesses the potential impact of each route option on landscape character. Possible mitigation measures are proposed both to mitigate adverse impacts on landscape character and to enhance the landscape as appropriate.

7.2 Assessment Techniques and Methodology

7.2.1 Guidelines

The following assessment was based on guidelines provided in:

- The DETR – DRB Volume 11 Environmental Assessment – 1993-1994
- The Landscape Institute and Institute of Environmental Management and Assessment – *Guidelines for Landscape and Visual Impact Assessment – 2002*
- The latest ‘best practice’ guidance for landscape character assessment, found within the Countryside Agency’s *Landscape Character Assessment – Guidance for England and Scotland 2002*.

7.3 References

In carrying out the assessment reference was made to the following documents and resources:

- Website-Countryside Character Initiative - The Countryside Agency
www.countryside.gov.uk
- Colour oblique aerial photographs taken along the study corridor
- City of York Local Plan Deposit Draft 1998 – York City Council
- Ryedale Local Plan - Ryedale District Council – 2002
- Scarborough Borough Local Plan – Scarborough Borough Council - 1999
- North Yorkshire County Structure Plan 1995- North Yorkshire County Council
- Website- Multi-agency Geographical Information for the Countryside, MAGIC
www.magic.gov.uk
- Ordnance Survey Landranger Map Nos:

- 105 York and Selby 1:50,000
- 100 Malton and Pickering 1:50,000
- 101 Scarborough, Bridlington and Filey 1:50,000
- Archived information dating 1989-1992 (in relation to the Malton to Seamer Section).
- RPS Clouston, Landscape Report, Various Volumes, March 1993
- Council for the Protection of Rural England Tranquil Areas Map 1995
- A64 Broad Based Study, Steer Davies Gleave, August 2003

Information on designations etc. was sought from the following statutory consultees:

- English Heritage
- The National Trust
- The Countryside Agency
- North Yorkshire County Council
- York City Council
- Ryedale District Council
- Scarborough Borough Council

The Countryside Agency in particular is concerned with the landscape impacts of the scheme, and in their response they referred also to impacts on cultural heritage, noise, air quality, public access, light pollution, visual intrusion, settlement character, severance, safety, public transport and the rural economy. This chapter considers the landscape character issues; other aspects are considered in other chapters.

The Agency will seek to ensure that any developments will not negatively impact on the character of the Howardian Hills AONB. The AONB Management Plan specifies that any developments on the A64 should respect the character and high quality of the landscape and find opportunities for new planting in the highway corridor.

7.4 Methodology

Baseline Survey

The purpose of this survey was to identify the defining characteristics of the landscape, to understand what its strengths and weaknesses are, and to establish how sensitive it is to potential changes caused by the schemes.

Definition of the study corridor: A boundary of 1km from the outermost route options has been chosen. Beyond 1 km, it is considered that any impact on landscape character will be insignificant, however, character mapping for the whole region was studied as part of the desktop study, (see baseline conditions below.)

Desktop study: To review existing studies of landscape character, to broadly define character zones, guided by the Countryside Agency Character mappings and to review OS maps of the area in conjunction with aerial photographs and other landscape designation information.

Site Visit: To understand the visual impact and landscape character of the area.

Definition of Scales of Impact

The landscape character type was defined by describing the landscape elements, which provide its character. Before impacts on those elements were assessed, criteria were established to ensure an objective and systematic assessment was made. There is no scale of impacts defined in DMRB Volume 11 Environment Assessment. Criteria were based on the WebTAG scale, within the reference of Landscape Character, shown in the table below:

Score	Comment
Large beneficial (positive) effect	Very few if any investment proposals are likely to merit this score.
Moderate beneficial (positive) effect	The proposals provide an opportunity to enhance the landscape because: they fit very well with the scale, landform and pattern of the landscape there is potential, through mitigation, to enable the restoration of characteristic features, partially lost or diminished as the result of changes resulting from intensive farming or inappropriate development they will enable a sense of place and scale to be restored through well-designed planting and mitigation measures, that is, characteristic features are enhanced through the use of local materials and species used to fit the proposal into the landscape they enable some sense of quality to be restored or enhanced through beneficial landscaping and sensitive design in a landscape which is not of any formally recognised quality they further government objectives to regenerate degraded countryside.
Slight beneficial (positive) effect	The proposals: fit well with the scale, landform and pattern of the landscape incorporate measures for mitigation to ensure they will blend in well with surrounding landscape. will enable some sense of place and scale to be restored, through well-designed planting and mitigation measures. maintain or enhance existing landscape character in an area which is not a designated landscape, nor vulnerable to change. avoid conflict with government policy towards protection of the countryside.
Neutral effect	The proposals are well designed to: complement the scale, landform and pattern of the landscape. incorporate measures for mitigation to ensure that the scheme will blend in well with surrounding landscape features and landscape elements avoid being visually intrusive nor have an adverse effect on the current level of tranquillity of the landscape through which the route passes. maintain existing landscape character in an area which is not a designated landscape, that is, neither national or local high quality, nor is it vulnerable to change. avoid conflict with government policy towards protection of the countryside.

Slight adverse (negative) effect	<p>The proposals: do not quite fit the landform and scale of the landscape although not very visually intrusive, will impact on certain views into and across the area. cannot be completely mitigated for because of the nature of the proposal itself or the character of the landscape through which it passes. affect an area of recognised landscape quality. conflict with local authority policies for protecting the local character of the countryside.</p>
Moderate adverse (negative) effect	<p>The proposals are: out of scale with the landscape, or at odds with the local pattern and landform. are visually intrusive and will adversely impact on the landscape not possible to fully mitigate for, that is, mitigation will not prevent the scheme from scarring the landscape in the longer term as some features of interest will be partly destroyed or their setting reduced or removed. will have an adverse impact on a landscape of recognised quality or on vulnerable and important characteristic features or elements. in conflict with local and national policies to protect open land and nationally recognised countryside as set out in PPG7 and PPG2.</p>
Large adverse (negative) effect	<p>The proposals are very damaging to the landscape in that they: are at considerable variance with the landform, scale and pattern of the landscape. are visually intrusive and would disrupt fine and valued views of the area. are likely to degrade, diminish or even destroy the integrity of a range of characteristic features and elements and their setting. will be substantially damaging to a high quality or highly vulnerable landscape, causing it to change and be considerably diminished in quality. cannot be adequately mitigated for. are in serious conflict with government policy for the protection of nationally recognised countryside as set out in PPG7.</p>
Very large adverse (negative) effect	<p>The proposals would result in exceptionally severe adverse impacts on the landscape because they: are at complete variance with the landform, scale and pattern of the landscape. are highly visual and extremely intrusive, destroying fine and valued views both into and across the area. would irrevocably damage or degrade, badly diminish or even destroy the integrity of characteristic features and elements and their setting. would cause a very high quality or highly vulnerable landscape to be irrevocably changed and its quality very considerably diminished. could not be mitigated for, that is, there are no measures that would protect or replace the loss of a nationally important landscape. cannot be reconciled with government policy for the protection of nationally recognised countryside as set out in PPG7.</p>

Table no 1 - Landscape: Definitions of Overall Assessment Scores

Development of Possible Mitigation Measures

The impacts of the scheme, on elements, which make up the landscape character, have been identified as part of the assessment process. Possible mitigation proposals are made where feasible and appropriate, to ensure that any compromise to the landscape character be kept to a minimum, and where possible, benefits are achieved.

The mitigation proposals defined in this report are defined by the limitations of the study, (see below) and will be subject to modification and development.

Assessment of Impacts

This is a Stage 1 assessment. The purpose of the impact assessment is to identify the landscape constraints associated with a broad corridor. Impact assessment has been carried out for each route option on all of the landscape characters affected within the study corridor. The impact on both landscape elements and character areas was assessed, taking proposed mitigation measures into account.

Limitations to Surveys or Assessments

Assessments have been made looking at the broadly defined corridor. There is no information available regarding land take, cuttings and embankments, construction activities etc.

Without detailed proposals it is not possible to put forward detailed mitigation proposals however, the mitigation measures, which have been suggested are thought to be appropriate based on the information available.

Within the time frame it has not been possible to agree the mitigation proposals with the Highways Agency, therefore these measures are subject to modification and development.

Assumptions in the Assessment

It is assumed that the management of the landscape will generally continue in the same way as currently practiced for the period up to construction. Changes in landscape management are difficult to predict and it is assumed that there will be no significant changes to existing landscape character, between the time of assessment and the start of construction. The impacts are therefore based on character as it stands now, mindful of future shrub and tree growth.

8 VISUAL IMPACT ASSESSMENT

8.1 Introduction

The assessment of Landscape Effects is divided into two main parts. Firstly, there is an assessment of impacts on the landscape character discussed in chapter seven and the second part is visual impact, this chapter. Visual impact relates to the way in which views from a significant number of properties and important community facilities would be affected by the proposals.

This section describes the views and visibility in a region extending approximately 1000m around the proposals. The study specifically assesses the potential visual impact of each route. Possible mitigation measures are proposed to mitigate adverse impacts.

8.2 Assessment Techniques and Methodology

8.2.1 Guidelines

The following assessment was based on guidelines provided in:

- The DETR – DRB Volume 11 Environmental Assessment – 1993-1994
- The Landscape Institute and Institute of Environmental Management and Assessment – Guidelines for Landscape and Visual Impact Assessment – 2002

8.2.2 References

In carrying out the assessment reference was made to the following documents and resources:

- Colour oblique aerial photographs taken along the study corridor
- Website- Multi-agency Geographical Information for the Countryside, MAGIC www.magic.gov.uk
- Ordnance Survey Landranger Map Nos:
105 York and Selby 1:50,000
100 Maton and Pickering 1:50,000
101 Scarborough, Bridlington and Filey 1:50,000
- Archived information dating 1989-1992 (in relation to the Malton to Seamer Section).
- RPS Clouston, Landscape Report, Various Volumes, March 1993

8.2.3 Methodology

Baseline Survey

The purpose of this survey was to identify the visual impact on settlements and community facilities and to establish how sensitive they are to potential change caused by the proposals. To establish criteria and definitions of thresholds by which magnitude and significance of impacts should be determined.

Definition of the study corridor: A boundary of 1km from the outermost route options has been chosen. Beyond 1 km, it is considered that any visual impact in most cases will be insignificant

Desktop study: To review OS maps of the area in conjunction with aerial photographs and other landscape information.

Site Visit: To understand the visual impact within the area.

Definition of Scales of Impact

The criteria used to assess impact were as follows:

- Change in type of view;
- Obstruction of views by proposals;
- Proximity of viewpoint to corridor;
- Scale of changes;
- Views of associated structures
- Views of lights and headlights

The thresholds for assessing the magnitude of impacts are based on the GoMMMs scale, as there is no scale of impacts defined in DMRB Volume 11 Environment Assessment. The scale is shown in the table below:

Score	Comment
Large beneficial (positive) effect	Very few if any settlements/community facilities are likely to merit this score.
Moderate beneficial (positive) effect	The proposals provide an opportunity to visually enhance the settlements/community facilities.
Slight beneficial (positive) effect	The proposals visually fit well with the settlements/community facilities:
Neutral effect	The proposals are well designed and have no visual impact on settlements/community facilities:
Slight adverse (negative) effect	The proposals do not visually fit well with the settlements/community facilities:
Moderate adverse (negative) effect	The proposals are visually obtrusive to settlements/community facilities.
Large adverse (negative) effect	The proposals are very visually intrusive settlements/community facilities
Very large adverse (negative) effect	The proposals would result in exceptionally severe adverse visual impacts settlements/community facilities

Table no 1 - Landscape: Definitions of Overall Assessment Scores

8.2.4 Development of Possible Mitigation Measures

The visual impacts of the scheme, on settlements/community facilities have been identified as part of the assessment process. Possible mitigation proposals are made where feasible and appropriate, to ensure that any compromise be kept to a minimum, and where possible, benefits are achieved.

The mitigation proposals defined in this report are defined by the limitations of the study, (see below) and will be subject to modification and development.

8.2.5 Assessment of Impacts

This is a Stage 1 assessment. The purpose of the impact assessment is to identify the visual constraints associated with a broad corridor. Impact assessment has been carried out for each route option within the study corridor. The visual impact was assessed, taking proposed mitigation measures into account. These were then assessed against a supposed time period to allow for the proposed mitigation measures such as planting to be effective. Therefore the impacts were looked at in relation to:

- A supposed first winter (Winter Year 1) this is the worse case scenario when very little of the mitigation would be effective;
- Winter 15 years on (Winter Year 15) this is when mitigation vegetation has matured, however all the leaves will be on the trees;
- Summer 15 years on (Summer Year 15), this is when mitigation vegetation has matured and screening is at its optimum.

8.2.6 Limitations to Surveys or Assessments

Assessments have been made looking at the broadly defined corridor. There is no information available regarding land take, cuttings and embankments, construction activities etc.

As this is a Stage One assessment visual impact on footpaths and the railway have not be surveyed. Only main settlements and distinctive individual settlements have been assessed.

Without detailed proposals it is not possible to put forward detailed mitigation proposals however, the mitigation measures, which have been suggested are thought to be appropriate based on the information available.

Within the time frame it has not been possible to agree the mitigation proposals with the Highways Agency, therefore these measures are subject to modification and development.

8.2.7 Assumptions in the Assessment

It is assumed that the management of the landscape will generally continue in the same way as currently practiced for the period up to construction. Changes in landscape management are difficult to predict and it is assumed that there will be no significant changes to existing landscape character, between the time of assessment and the start of construction. The impacts are therefore based on character as it stands now, mindful of future shrub and tree growth.

8.3 The Base Line Conditions of Section 1

8.3.1 The Base Line Conditions Section 1 from York Bypass (at A1237 Hopgrove junction) to Malton Bypass (at B1248 Musley Bank Junction)

The visual impact was determined by a site visit, (10th November 2004) and desktop study. The desktop study included looking at OS plans, aerial photographs of the area and site photographs.

Section 1 runs through two distinct landscape character areas, with Barton Hill as the transition point.

Hopgrove junction to Barton Hill

This area is covered by the general description of Vale of York Landscape Character Area. The topography is predominantly low lying with large arable fields, trimmed hedges and angular broadleaf and conifer plantations. Extensive drainage ditches help to define this regularity. The existing A64 road boundary is often defined by individual mature trees, which are also clustered around farm buildings. Settlements are linear but do not run along the existing A64. Isolated farm buildings scattered within the area, some which do front onto the existing A64.

Barton Hill to the Musley Bank Junction on the Malton Bypass

This area is covered by the general description of Howardian Hills Landscape Character Area. The character area encompasses the Howardian Hills AONB. The topography within this area is hilly providing a varied landscape, areas of deciduous woodland, small fields, hidden valleys, long and hidden views. There are few settlements, however the study area is on the edge of the designed parkland of Castle Howard.

8.3.2 The Legislative Framework Section 1 from York Bypass (at A1237 Hopgrove junction) to Malton Bypass (at B1248 Musley Bank Junction)

There are no specific legislative issues affecting the visual impact analysis.

8.4 Scheme Description of Section 1

8.4.1 Section 1 from York Bypass (at A1237 Hopgrove junction) to Malton Bypass (at B1248 Musley Bank Junction)

The proposed scheme is for various upgrade options for the A64 between York and Seamer. These are as follows:

- Completely dual the A64 from York to Seamer. (A64 Broad Based Study, Steer Davies Gleave, 2003, Option 4).
- Between York and Malton, the route is generally to follow the existing A64.
- Two lines east of Malton to be assessed:
- Generally following the line of the existing A64 – renamed by Capita Symonds as the On Line Route
- Following the line of the old 1992 Public Consultation – renamed by Capita Symonds as the Off Line Route

Assess a scheme which duals between York and Whitwell Bypass, improves the road to modern single carriageway standards between Whitwell and Malton Bypasses, duals between Malton and Rillington and improves the road to modern single carriageway east of Rillington (Steer Davies Gleave, Option 3).

At a stage One Environmental Impact Assessment the objective is to assess a broad corridor for advantages, disadvantages and constraints. Therefore this report is assessing the route as a broad corridor and not isolating specific requirements. All proposals have a visual impact.

8.5 Identification of Impacts of Section 1

8.5.1 Section 1 from York Bypass (at A1237 Hopgrove junction) to Malton Bypass (at B1248 Musley Bank Junction)

Construction Impacts

Construction impacts are not assessed in this report, as information on construction activities is inappropriate at this stage in the study.

Operational Impacts

The following operational impacts will be caused by the proposal:

- Increased visual impact caused widening the single carriageway to dual carriageway;
- Increased visual impact caused by possible elevation of the new carriageway above existing ground level to stay at grade with the single carriageway, this will be predominantly within the Hopgrove junction to Barton Hill section;
- Increased visual impact for properties close to the scheme caused by new road markings and signage including those on the access roads;
- Possible headlight glare;

The following table should be read in conjunction with figure figures 9053/S08/01/ a-c

	Group	Group = Group of buildings without defined placename Settlement = village/hamlet or part of Individual= individual property/farmstead			
	Types of Properties	D = Domestic, F = Farmhouse, I = Industrial, C = Commercial			
	Impacts	3 or -3 = Substantial beneficial or adverse = significant improvement or deterioration in the existing view 2 or -2 = Moderate beneficial or adverse = noticeable improvement or deterioration in the existing view 1 or -1 = Slight beneficial or adverse = barely perceptible improvement or deterioration in the existing view 0 = No change = no discernable improvement or deterioration in the existing view			
Plan Ref	Group/Individual/Settlement	Type	Existing View	Distance (m)	Visual Impact
Y1	Group	D, C	Fields	Within Corridor	-2
Y2	Group	D	Fields, domestic house boundaries	Within Corridor	-3
Y3	Individual	C	Fields	Within Corridor	-3
Y4	Group	D, C	A64, Fields	Within Corridor	-3
Y5	Group	D, C	A64, fields	Within Corridor	-3

Y6	Group	F, D, C	Fields	Within Corridor	-1
Y7	Group	D	A64, Fields	Within Corridor	-2
Y8	Group	C, F	A64, Fields	Within Corridor	-2
Y9	Group	C, D	A64, Fields	Within Corridor	-1
Y10	Group	F, D, C	Fields, Woodland, Pylons	Within Corridor	-2
Y11	Group	D	Fields, Woodland, Pylons	Within Corridor	-1
Y12	Individual	D	Fields, Pylons	Within Corridor	-2
Y13	Group	F	A64, Fields	Within Corridor	-1
Y14	Group	D, C	Historic Landscape, Woodland, Pylons	On perimeter of Corridor	-1

Table 2 Visual Impact Analysis - Section 1 from York Bypass (at A1237 Hopgrove junction) to Malton Bypass (at B1248 Musley Bank Junction)

8.6 Possible Mitigation Measures of Section 1

8.6.1 Section 1 from York Bypass (at A1237 Hopgrove junction) to Malton Bypass (at B1248 Musley Bank Junction)

For a Stage One Environmental Impact Assessment, mitigation proposals are not agreed with the Highways Agency. At this stage mitigation measures are to be regarded as suggestions, which can only be agreed upon, once designs are developed.

Construction mitigation is not included in this report, as at this stage construction is not considered.

The mitigation measures for this section of the study area are listed below:

- To ease the upgrades into the receptor landscape, the route should follow the existing topography as much as is possible;
- Any amendments to junctions should be undertaken at grade;
- Create hedgerows as field boundaries where possible;
- Screen planting alongside settlements and feeder roads;
- Planting is to consist of appropriate local species and is to be carried out with regard to the requirements of the local ecology, driver views, landscape character and other issues covered in this report;
- Designing structures carefully to reduce their visual intrusion, for example by using local materials, muted colours and low profiles;
- Screen planting to block views of the proposals from viewpoints within the Castle Howard Estate and from the main house itself.

8.7 Impact Assessment of Section 1

For the purpose of visual impact assessment only the operational phase impact is evaluated.

The following table should be read in conjunction with figure figures 9053/S08/01/ a-c

	Group	Group = Group of buildings without defined placename Settlement = village/hamlet or part of Individual= individual property/farmstead
	Types of Properties	D = Domestic, F = Farmhouse, I = Industrial, C = Commercial

Plan Ref	Group/Individual/Settlement	Type	Existing View	Distance (m)	Winter Year 1	Winter Year 15	Summer Year 15
	Impacts		3 or -3 = Substantial beneficial or adverse = significant improvement or deterioration in the existing view 2 or -2 = Moderate beneficial or adverse = noticeable improvement or deterioration in the existing view 1 or -1 = Slight beneficial or adverse = barely perceptible improvement or deterioration in the existing view 0 = No change = no discernable improvement or deterioration in the existing view				
Y1	Group	D, C	Fields	Within Corridor	-2	-1	0
Y2	Group	D	Fields, domestic house boundaries	Within Corridor	-3	-2	-2
Y3	Individual	C	Fields	Within Corridor	-3	-2	-1
Y4	Group	D, C	A64, Fields	Within Corridor	-3	-2	-2
Y5	Group	D, C	A64, fields	Within Corridor	-3	-3	-3
Y6	Group	F, D, C	Fields	Within Corridor	-1	-1	0
Y7	Group	D	A64, Fields	Within Corridor	-2	-2	-2
Y8	Group	C, F	A64, Fields	Within Corridor	-2	-1	-1
Y9	Group	C, D	A64, Fields	Within Corridor	-1	-1	-1
Y10	Group	F, D, C	Fields, Woodland, Pylons	Within Corridor	-2	-1	-1
Y11	Group	D	Fields, Woodland, Pylons	Within Corridor	-1	0	0
Y12	Individual	D	Fields, Pylons	Within Corridor	-2	-2	-2
Y13	Group	F	A64, Fields	Within Corridor	-1	-1	-1
Y14	Group	D, C	Historic Landscape, Woodland, Pylons	On perimeter of Corridor	-1	-1	0

Table 3 Visual Impact Analysis taking into account possible mitigation, Section 1 from York Bypass (at A1237 Hopgrove junction) to Malton Bypass (at B1248 Musley Bank Junction)

8.8 Summary of Section 1

8.8.1 Section 1 from York Bypass (at A1237 Hopgrove junction) to Malton Bypass (at B1248 Musley Bank Junction)

The proposal will have a visual impact as on the landscape and settlements as discussed above. The information from Table 3 can be summarised to provide a single degree of impact at a certain time period. (Tables 4, 5 and 6). However at this stage the visual impact assessment is only indicative in relation to a broad corridor. Once route/s option are detailed, further on-site survey work to look specifically at visual impacts on property will take place. (A stage Two assessment).

York to Malton	Subst. Adverse	Mod. Adverse	Slight Adverse	No Change	Slight Benefit	Mod. Benefit	Subst Benefit	Total
	-3	-2	-1	0	1	2	3	
	4	5	5	0	0	0	0	14

**Table 4 Visual Impact Analysis Summary Views in Winter Year 1
Section 1 from York Bypass (at A1237 Hopgrove junction) to Malton Bypass (at B1248 Musley Bank Junction)**

York to Malton	Subst. Adverse	Mod. Adverse	Slight Adverse	No Change	Slight Benefit	Mod. Benefit	Subst Benefit	Total
	-3	-2	-1	0	1	2	3	
	1	5	7	1	0	0	0	14

**Table 5 Visual Impact Analysis Summary Views in Winter Year 15
Section 1 from York Bypass (at A1237 Hopgrove junction) to Malton Bypass (at B1248 Musley Bank Junction)**

York to Malton	Subst. Adverse	Mod. Adverse	Slight Adverse	No Change	Slight Benefit	Mod. Benefit	Subst Benefit	Total
	-3	-2	-1	0	1	2	3	
	1	4	5	4	0	0	0	14

**Table 6 Visual Impact Analysis Summary Views in Summer Year 15
Section 1 from York Bypass (at A1237 Hopgrove junction) to Malton Bypass (at B1248 Musley Bank Junction)**

From the above tables it can be summarised that initially the route will have overall a moderate to substantial adverse visual impact on settlements and community facilities. By the summer of Year 15, this impact there is still an adverse impact which can be see overall as moderate adverse. Therefore the Route between York to Malton has overall a moderate to severe adverse visual impact.

8.8.2 Limitations and Assumptions of Section 1 from York Bypass (at A1237 Hopgrove junction) to Malton Bypass (at B1248 Musley Bank Junction)

These were discussed in 8.2.5 and 8.2.6. The existing dualled section of roadway was not analysed.

8.8.3 Potential Further Mitigation of Section 1 from York Bypass (at A1237 Hopgrove junction) to Malton Bypass (at B1248 Musley Bank Junction)

Limited opportunities exist for further off-site planting to shield other settlements, villages, individual properties. These further mitigation opportunities have not been taken into account in making this assessment since they are beyond the immediate control of the Highways Agency.

8.9 The Base Line Conditions of Section 2 On Line

8.9.1 The Base Line Conditions Section 2 On Line, from Malton Bypass (at Brambling Fields) to Seamer Bypass (at Seamer Carr)

The visual impact was determined by a site visit, (10th November 2004) and desktop study. The desktop study included looking at OS plans aerial photographs of the area and site photographs.

Section 2 On Line runs along the boundaries of the Vale of Pickering character area and Yorkshire Wolds character area. The topography is predominantly flat and only has a change in contours as the Vale of Pickering meets the Yorkshire Wolds. The existing A64 runs along the periphery between the Vale of Pickering and the Yorkshire Wolds. There are open views over the Vale to the Yorkshire Moors in the North. Views are withheld by the Yorkshire Wolds to the south and east, along the edge of the study area.

The River Derwent is the main watercourse running to the north of the study area, however due to the low lying land, the northern edge of the study area is within the floodplain. In this area is a network of drainage channels. The majority of the vegetation is dispersed on the slopes of the Wolds. Some mature trees are scattered within the hedgerows, however these become less frequent as the corridor moves away from Malton. The Corridor runs through the Historic Parks and Gardens of Scampston.

The villages and settlements within this area are predominantly along the southern boundary of the Vale of Pickering, on slightly elevated ground.

8.9.2 The Legislative Framework Section 2 from Malton Bypass (at Brambling Fields) to Seamer Bypass (at Seamer Carr) On Line

There are no specific legislative issues that affect the visual impact analysis.

8.10 Scheme Description of Section 2 On Line

8.10.1 Section 2 On Line from Malton Bypass (at Brambling Fields) to Seamer Bypass (at Seamer Carr)

The proposed scheme is for various upgrade options for the A64 between York and Seamer.

These are as follows:

- Completely dual the A64 from York to Seamer. (A64 Broad Based Study, Steer Davies Gleave, 2003, Option 4).
- Between York and Malton, the route is generally to follow the existing A64.
- Two lines east of Malton to be assessed:
- Generally following the line of the existing A64 – renamed by Capita Symonds as the On Line Route
- Following the line of the old 1992 Public Consultation – renamed by Capita Symonds as the Off Line Route

Assess a scheme which duals between York and Whitwell Bypass, improves the road to modern single carriageway standards between Whitwell and Malton Bypasses, duals between

Malton and Rillington and improves the road to modern single carriageway east of Rillington (Steer Davies Gleave, Option 3).

At a stage One Environmental Impact Assessment the objective is to assess a broad corridor for advantages, disadvantages and constraints. Therefore this report is assessing the route as a broad corridor and not isolating specific requirements. All proposals have a visual impact.

8.11 Identification of Impacts of Section 2 On Line

8.11.1 Section 2 from Malton Bypass (at Brambling Fields) to Seamer Bypass (at Seamer Carr) On Line

Construction Impacts

Construction impacts are not assessed in this report, as information on construction activities is inappropriate at this stage in the study.

Operational Impacts

The following operational impacts will be caused by the proposal:

- Increased visual impact caused widening the single carriageway to dual carriageway;
- Increased visual impact for properties close to the scheme caused by new road markings and signage including those on the access roads;
- Possible headlight glare;

The following table should be read in conjunction with figures 9053/S08/02/ a-c

	Group	Group = Group of buildings without defined placename Settlement = village/hamlet or part of Individual= individual property/farmstead			
	Types of Properties	D = Domestic, F = Farmhouse, I = Industrial, C = Commercial			
	Impacts	3 or -3 = Substantial beneficial or adverse = significant improvement or deterioration in the existing view 2 or -2 = Moderate beneficial or adverse = noticeable improvement or deterioration in the existing view 1 or -1 = Slight beneficial or adverse = barely perceptible improvement or deterioration in the existing view 0 = No change = no discernable improvement or deterioration in the existing view			
Plan Ref	Group/Individual/Settlement	Type	Existing View	Distance (m)	Visual Impact
On1	Individual	F	A64, Fields	Within corridor	-3
On2	Settlement	D	A64, Woodland	Within corridor	-3
On3	Individual	D	A64, Fields, Woodlands	Within corridor	-3
On4	Settlement	D	A64, settlement, Fields	Within corridor	-3
On5	Settlement	D	A64, Houses, Fields	Within corridor	-1
On6	Group	C, D	Historic Landscape	Within corridor	-1
On7	Group	F, D	Historic Landscape	Within corridor	-3
On8	Settlement	D	A64, Fields, Woodlands	Within corridor	+2
On9	Settlement	D	A64, Fields, Woodlands	Within corridor	+2
On10	Group	F, D	A64, Fields, Woodlands	Within corridor	-3
On11	Settlement	D	A64, Fields, Woodlands	Within corridor	+2
On12	Settlement	D	A64, Fields	Within corridor	-3
On13	Settlement	D	A64, Fields	Within corridor	-3

On14	Settlement	D	A64, Fields	Within corridor	-3
On15	Settlement & Individual	D, C	A64, Fields	Within corridor	-2
On16	Individual	F	A64, Fields	Within corridor	+1
On17	Group	D	A64, Fields, Railway	Within corridor	-3
On18	Settlement	D	A64, Fields, Railway	Within corridor	-2

Table 7 Visual Impact Analysis - Section 2 from Malton Bypass (at Brambling Fields) to Seamer Bypass (at Seamer Carr) On Line

8.12 Possible Mitigation Measures of Section 2 On Line

8.12.1 Section 2 from Malton Bypass (at Brambling Fields) to Seamer Bypass (at Seamer Carr) On Line

For a Stage One Environmental Impact Assessment, mitigation proposals are not agreed with the Highways Agency. At this stage mitigation measures are to be regarded as suggestions, which can only be agreed upon once designs are developed.

Construction mitigation is not included in this report, as at this stage construction is not considered.

The mitigation measures for this section of the study area are listed below:

- To ease the upgrades into the receptor landscape, the route should follow the existing topography as much as is possible;
- Any amendments to junctions should be undertaken at grade;
- Create hedgerows as field boundaries where possible;
- Screen planting alongside settlements and feeder roads;
- Planting is to consist of appropriate local species and is to be carried out with regard to the requirements of the local ecology, driver views, landscape character and other issues covered in this report;
- Designing structures carefully to reduce their visual intrusion, for example by using local materials, muted colours and low profiles;
- Careful, sympathetic planting to blend and screen the views of the proposal from and within Scampston Park.

8.13 Impact Assessment of Section 2 On Line

For the purpose of visual impact assessment only the operational phase impact is evaluated.

The following table should be read in conjunction with figures 9053/S08/02/ a-c

Group	Group = Group of buildings without defined placename Settlement = village/hamlet or part of Individual= individual property/farmstead
Types of Properties	D = Domestic, F = Farmhouse, I = Industrial, C = Commercial

Plan Ref	Group/Individual/Settlement	Type	Existing View	Distance (m)	Winter Year 1	Winter Year 15	Summer Year 15
Impacts			3 or -3 = Substantial beneficial or adverse = significant improvement or deterioration in the existing view 2 or -2 = Moderate beneficial or adverse = noticeable improvement or deterioration in the existing view 1 or -1 = Slight beneficial or adverse = barely perceptible improvement or deterioration in the existing view 0 = No change = no discernable improvement or deterioration in the existing view				
On1	Individual	F	A64, Fields	Within corridor	-3	-1	-1
On2	Settlement	D	A64, Woodland	Within corridor	-3	-2	-2
On3	Individual	D	A64, Fields, Woodlands	Within corridor	-3	-2	-2
On4	Settlement	D	A64, settlement, Fields	Within corridor	-3	-2	-1
On5	Settlement	D	A64, Houses, Fields	Within corridor	-1	+1	+2
On6	Group	C, D	Historic Landscape	Within corridor	-1	+1	+2
On7	Group	F, D	Historic Landscape	Within corridor	-3	-3	-3
On8	Settlement	D	A64, Fields, Woodlands	Within corridor	+2	+2	+2
On9	Settlement	D	A64, Fields, Woodlands	Within corridor	+2	+2	+2
On10	Group	F, D	A64, Fields, Woodlands	Within corridor	-3	-3	-2
On11	Settlement	D	A64, Fields, Woodlands	Within corridor	+2	+2	+3
On12	Settlement	D	A64, Fields	Within corridor	-3	-3	-3
On13	Settlement	D	A64, Fields	Within corridor	-3	-3	-3
On14	Settlement	D	A64, Fields	Within corridor	-3	-3	-3
On15	Settlement & Individual	D, C	A64, Fields	Within corridor	-2	-1	-1
On16	Individual	F	A64, Fields	Within corridor	+1	+1	+2
On17	Group	D	A64, Fields, Railway	Within corridor	-3	-2	-2
On18	Settlement	D	A64, Fields, Railway	Within corridor	-2	-2	-1

Table 8 Visual Impact Analysis taking into account possible mitigation, Section 2 from Malton Bypass (at Brambling Fields) to Seamer Bypass (at Seamer Carr) On Line

8.14 Summary of Section 2 On Line

8.14.1 Section 2 from Malton Bypass (at Brambling Fields) to Seamer Bypass (at Seamer Carr) On Line

The proposal will have a visual impact as on the landscape and settlements as discussed above. The information from Table 8 can be summarised to provide a single degree of impact at a certain time period. (Tables 9, 10 and 11). However at this stage the visual impact assessment is only indicative in relation to a broad corridor. Once the route/s option are detailed, further on-site survey work to look specifically at visual impacts on property will take place. (A stage Two assessment).

Malton to Seamer On Line	Subst. Adverse	Mod. Adverse	Slight Adverse	No Change	Slight Benefit	Mod. Benefit	Subst Benefit	Total
	-3	-2	-1	0	1	2	3	
	10	2	2	0	1	3	0	18

**Table 9 Visual Impact Analysis Summary Views in Winter Year 1
Section 2 from Malton Bypass (at Brambling Fields) to Seamer Bypass (at Seamer Carr)
On Line**

Malton to Seamer On Line	Subst. Adverse	Mod. Adverse	Slight Adverse	No Change	Slight Benefit	Mod. Benefit	Subst Benefit	Total
	-3	-2	-1	0	1	2	3	
	5	5	2	0	3	3	0	18

**Table 10 Visual Impact Analysis Summary Views in Winter Year 15
Section 2 from Malton Bypass (at Brambling Fields) to Seamer Bypass (at Seamer Carr)
On Line**

Malton to Seamer On Line	Subst. Adverse	Mod. Adverse	Slight Adverse	No Change	Slight Benefit	Mod. Benefit	Subst Benefit	Total
	-3	-2	-1	0	1	2	3	
	4	4	4	0	0	5	1	18

**Table 11 Visual Impact Analysis Summary Views in Summer Year 15
Section 2 from Malton Bypass (at Brambling Fields) to Seamer Bypass (at Seamer Carr)
On Line**

From the above tables it can be summarised that initially the route will have overall a substantial adverse visual impact on settlements and community facilities. By the summer of Year 15, this impact there is still an adverse impact which can be see overall as moderate adverse. Therefore the Online Route between Malton to Seamer has overall a moderate to severe adverse visual impact. However there are some sections of settlements, which would benefit visually from the proposals.

8.15 Limitations and Assumptions of Section 2 from Malton Bypass (at Brambling Fields) to Seamer Bypass (at Seamer Carr) On Line

These were discussed in 8.2.5 and 8.2.6.

8.16 Potential Further Mitigation of Section 2 from Malton Bypass (at Brambling Fields) to Seamer Bypass (at Seamer Carr) On Line

Limited opportunities exist for further off-site planting to shield other settlements, villages, individual properties. These further mitigation opportunities have not been taken into account in making this assessment since they are beyond the immediate control of the Highways Agency.

8.17 The Base Line Conditions of Section 2 Off Line

8.17.1 The Base Line Conditions Section 2 Off Line, from Malton Bypass (at Brambling Fields) to Seamer Bypass (at Seamer Carr)

The visual impact was determined by a site visit (10th November 2004) and desktop study. The desktop study included looking at OS plans, aerial and site photographs of the area.

Section 2 Off Line runs within the Vale of Pickering character area and the corridor encompasses the York Railway line. This section is very typical of the Vale of Pickering character area, low lying and flat. Views are either wide, contained only by the Wolds and the Yorkshire Moors or closely contained by slight rises the topography and nearby vegetation/manmade features.

The River Derwent is the main watercourse within the area and in places the study area is within the floodplain. This area is typified by numerous drainage channels, canalised water courses, Ings (wetland areas) and Carrs (marshy areas). These surround rectangular fields which are intensively farmed. The fields increase in size as we move west to east. Hedgerows and tree cover is minimal. Hedgerows are infrequent and often in poor condition, with infrequent hedgerow trees. Tree cover is predominantly in the form of shelterbelts, although around Scampston and East Knapton there are trees in the field boundaries. The study area just touches on the northern edge of Scampston Park, this is the exception to the area, providing isolated mature trees and an area of woodland.

There are no settlements within the study area however scattered farm buildings run throughout the area. Adjacent to the railway at crossing points are associated railway buildings, houses and West Knapton Power Station is within the area.

8.17.2 The Legislative Framework Section 2 from Malton Bypass (at Brambling Fields) to Seamer Bypass (at Seamer Carr) Off Line

There are no specific legislative issues affecting the visual impact analysis.

8.18 Scheme Description of Section 2 Off Line

8.18.1 Section 2 Off Line from Malton Bypass (at Brambling Fields) to Seamer Bypass (at Seamer Carr)

The proposed scheme is for various upgrade options for the A64 between York and Seamer. These are as follows:

- Completely dual the A64 from York to Seamer. (A64 Broad Based Study, Steer Davies Gleave, 2003, Option 4).
- Between York and Malton, the route is generally to follow the existing A64.
- Two lines east of Malton to be assessed:
- Generally following the line of the existing A64 – renamed by Capita Symonds as the On Line Route
- Following the line of the old 1992 Public Consultation – renamed by Capita Symonds as the Off Line Route

Assess a scheme which duals between York and Whitwell Bypass, improves the road to modern single carriageway standards between Whitwell and Malton Bypasses, duals between Malton and Rillington and improves the road to modern single carriageway east of Rillington (Steer Davies Gleave, Option 3).

At a stage One Environmental Impact Assessment the objective is to assess a broad corridor for advantages, disadvantages and constraints. Therefore this report is assessing the route as a broad corridor and not isolating specific requirements. All proposals impact on the landscape character.

8.19 Identification of Impacts of Section 2 Off Line

8.19.1 Section 2 from Malton Bypass (at Brambling Fields) to Seamer Bypass (at Seamer Carr) Off Line

Construction Impacts

Construction impacts are not assessed in this report, as information on construction activities is inappropriate at this stage in the study.

Operational Impacts

The following operational impacts will be caused by the proposal:

- Increased visual impact caused widening the single carriageway to dual carriageway;
- Increased visual impact caused by possible elevation of crossings of the railway
- Increased visual impact for properties close to the scheme caused by new road markings and signage including those on the access roads;
- Possible headlight glare;

The following table should be read in conjunction with figures 9053/S08/03/ a-c

	Group	Group = Group of buildings without defined place name Settlement = village/hamlet or part of Individual= individual property/farmstead			
	Types of Properties	D = Domestic, F = Farmhouse, I = Industrial, C = Commercial			
	Impacts	3 or -3 = Substantial beneficial or adverse = significant improvement or deterioration in the existing view 2 or -2 = Moderate beneficial or adverse = noticeable improvement or deterioration in the existing view 1 or -1 = Slight beneficial or adverse = barely perceptible improvement or deterioration in the existing view 0 = No change = no discernable improvement or deterioration in the existing view			
Plan Ref	Group/Individual/Settlement	Type	Existing View	Distance (m)	Visual Impact
Off1	Individual	F	A64, Fields, woodland	Within corridor	-3
Off2	Group	D,F	Railway, Fields	Within corridor	-3
Off3	Settlement	D,C	Fields, A64	Edge of corridor	+2
Off4	Group	D	Railway, Fields, Pylons	Within corridor	-2
Off5	Settlement	D	Railway, Fields	Within corridor	+1
Off6	Settlement	D	Railway, Fields, Woodland, A64, Historic ldspe	Within corridor	+2

Off7	Group Settlement &	I,D	Railway, Woodland, , A64	Fields,	Within corridor	-1
Off8	Settlement	D	Railway, Woodland, A64	Fields,	Within corridor	-1
Off9	Individual	I	Railway, Fields		Within corridor	-2
Off10	Group	F, D	Shelterbelts, A64, Fields		Edge of corridor	+3
Off11	Individual	F	Railway, Fields, Shelterbelts	Pylons,	Within corridor	-1
Off12	Group	D	Railway, Fields		Within corridor	-3
Off13	Settlement	D	Fields, A64		Edge of corridor	+3
Off14	Group	F,D	Railway, Fields		Within corridor	-1
Off15	Settlement	D, church	A64, Railway, Fields		Within corridor	-1
Off16	Group	D	Railway, Fields		Within corridor	-3
Off17	Settlement	I, Church, D	Railway, Fields, A64		Within corridor	+1
Off18	Settlement	D	A64, Fields		Edge of corridor	+3
Off19	Settlement & Individual	D,C	Railway, Fields, Woodland	A64,	Within corridor	+1
Off20	Individual	F	A64, Fields		Within corridor	-2
Off21	Settlement	D	A64, Fields		Within corridor	-3
Off22	Settlement	D, Church	A64, Fields		Within corridor	-1

Table 12 Visual Impact Analysis
Section 2 from Malton Bypass (at Brambling Fields) to Seamer Bypass (at Seamer Carr)
Off Line

8.20 Possible Mitigation Measures of Section 2 Off Line

8.20.1 Section 2 from Malton Bypass (at Brambling Fields) to Seamer Bypass (at Seamer Carr) Off Line

For a Stage One Environmental Impact Assessment, mitigation proposals are not agreed with the Highways Agency. At this stage mitigation measures are to be regarded as suggestions, which can only be agreed upon once designs are developed.

Construction mitigation is not included in this report, as at this stage construction is not considered.

The mitigation measures for this section of the study area are listed below:

- To ease the upgrades into the receptor landscape, the route should follow the existing topography as much as is possible;
- Any amendments to junctions should be undertaken at grade;
- Create hedgerows as field boundaries where possible;
- Screen planting alongside settlements and feeder roads;
- Planting is to consist of appropriate local species and is to be carried out with regard to the requirements of the local ecology, driver views, landscape character and other issues covered in this report;
- Designing structures carefully to reduce their visual intrusion, for example by using local materials, muted colours and low profiles;
- Careful, sympathetic planting to blend and screen the views of the proposal from Scampston Park.

8.21 Impact Assessment of Section 2 Off Line

8.21.1 Section 2 from Malton Bypass (at Brambling Fields) to Seamer Bypass (at Seamer Carr) Off Line

For the purpose of visual impact assessment only the operational phase impact is evaluated.

The following table should be read in conjunction with figure figures 9053/S08/03/ a-c

	Group	Group = Group of buildings without defined place name Settlement = village/hamlet or part of Individual= individual property/farmstead					
	Types of Properties	D = Domestic, F = Farmhouse, I = Industrial, C = Commercial					
	Impacts	3 or -3 = Substantial beneficial or adverse = significant improvement or deterioration in the existing view 2 or -2 = Moderate beneficial or adverse = noticeable improvement or deterioration in the existing view 1 or -1 = Slight beneficial or adverse = barely perceptible improvement or deterioration in the existing view 0 = No change = no discernable improvement or deterioration in the existing view					
Plan Ref	Group/Individual/Settlement	Type	Existing View	Distance (m)	Winter Year 1	Winter Year 15	Summer Year 15
Off1	Individual	F	A64, Fields, woodland	Within corridor	-3	-2	-1
Off2	Group	D,F	Railway, Fields	Within corridor	-3	-2	-2
Off3	Settlement	D,C	Fields, A64	Edge of corridor	+2	+3	+3
Off4	Group	D	Railway, Fields, Pylons	Within corridor	-2	-2	-2
Off5	Settlement	D	Railway, Fields	Within corridor	+1	+2	+3
Off6	Settlement	D	Railway, Fields, Woodland	Within corridor	+2	+3	+3
Off7	Group & Settlement	I,D	Railway, Fields, Woodland	Within corridor	-1	0	0
Off8	Settlement	D	Railway, Fields, Woodland	Within corridor	-1	0	0
Off9	Individual	I	Railway, Fields	Within corridor	-2	-1	-1
Off10	Group	F,D	Shelterbelts, A64, Fields	Edge of Corridor	+3	+3	+3
Off11	Individual	F	Railway,	Within	-1	-1	-1

			Fields, Pylons, Shelterbelts	corridor			
Off12	Group	D	Railway, Fields	Within corridor	-3	-3	-3
Off13	Settlement	D	Fields, A64	Edge of corridor	+3	+3	+3
Off14	Group	F,D	Railway, Fields	Within corridor	-1	-1	-1
Off15	Group	D	A64, Railway, Fields	Within corridor	-1	+1	+2
Off16	Group	D	Railway, Fields	Within corridor	-3	-3	-2
Off17	Settlement	I, Church, D	Railway, Fields, A64	Within corridor	+1	+2	+3
Off18	Settlement	D	A64, Fields	Edge of corridor	+3	+3	+3
Off19	Settlement & Individual	D,C	Railway, Fields, A64, Woodland	Within corridor	+1	+2	+3
Off20	Individual	F	A64, Fields	Within corridor	-2	-2	-2
Off21	Settlement	D	A64, Fields	Within corridor	-3	-3	-2
Off22	Settlement	D, Church	A64, Fields	Within corridor	-1	-1	-1

Table 13 Visual Impact Analysis taking into account possible mitigation, Section 2 from Malton Bypass (at Brambling Fields) to Seamer Bypass (at Seamer Carr) Off Line

8.22 Summary of Section 2 Off Line

8.22.1 Section 2 from Malton Bypass (at Brambling Fields) to Seamer Bypass (at Seamer Carr) Off Line

The proposal will have a visual impact as on the landscape and settlements as discussed above. The information from Table 8 can be summarised to provide a single degree of impact at a certain time period. (Tables 14, 15 and 16). However at this stage the visual impact assessment is only indicative in relation to a broad corridor. Once the route/s option are detailed, further on-site survey work to look specifically at visual impacts on property will take place. (A stage Two assessment).

Malton to Seamer Off Line	Subst. Adverse -3	Mod. Adverse -2	Slight Adverse -1	No Change 0	Slight Benefit 1	Mod. Benefit 2	Subst Benefit 3	Total
	5	3	6	0	3	2	3	22

Table 14 Visual Impact Analysis Summary Views in Winter Year 1

Section 2 from Malton Bypass (at Brambling Fields) to Seamer Bypass (at Seamer Carr) Off Line

Malton to Seamer Off Line	Subst. Adverse	Mod. Adverse	Slight Adverse	No Change	Slight Benefit	Mod. Benefit	Subst Benefit	Total
	-3	-2	-1	0	1	2	3	
	3	4	4	2	1	3	5	22

**Table15 Visual Impact Analysis Summary Views in Winter Year 15
Section 2 from Malton Bypass (at Brambling Fields) to Seamer Bypass (at Seamer Carr) Off Line**

Malton to Seamer Off Line	Subst. Adverse	Mod. Adverse	Slight Adverse	No Change	Slight Benefit	Mod. Benefit	Subst Benefit	Total
	-3	-2	-1	0	1	2	3	
	1	5	5	2	0	1	8	22

**Table 16 Visual Impact Analysis Summary Views in Summer Year 15
Section 2 from Malton Bypass (at Brambling Fields) to Seamer Bypass (at Seamer Carr) Off Line**

From the above tables it can be summarised that initially the route will have overall a moderate adverse visual impact on settlements and community facilities. By the summer of Year 15, this impact due to the mitigation will have moderated down to overall an slight benefit visual impact within the area. Therefore the Offline Route between Malton to Seamer has overall visual impact that will be beneficial in general to the communities and settlements within the area.

8.23 Limitations and Assumptions of Section 2 from Malton Bypass (at Brambling Fields) to Seamer Bypass (at Seamer Carr) Off Line

These were discussed in 8.2.5 and 8.2.6

8.24 Potential Further Mitigation of Section 2 from Malton Bypass (at Brambling Fields) to Seamer Bypass (at Seamer Carr) Off Line

Limited opportunities exist for further off-site planting to shield other settlements, villages, individual properties. These further mitigation opportunities have not been taken into account in making this assessment since they are beyond the immediate control of the Highways Agency.

8.25 Overall Summary

Due to the topography and landscape character of the area all the proposals have an adverse visual impact on the settlements and community facilities within the broad corridor between York and Seamer.

9 LAND USE – DEMOLITION OR PRIVATE PROPERTY AND ASSOCIATED LAND TAKE

9.1 Introduction

The assessment of the effects of land take resulting from a road scheme can cover a wide range of land values and primary uses. This section assesses the impact of demolition of private properties required to build the scheme.

9.2 Assessment Techniques and Methodology

9.2.1 Guidelines

In accordance with the guidance presented in DMRB Volume 11, Section 3, Part 6, Chapter 2, this assessment has studied the effects of demolition of private property and land take.

9.2.2 References

- Route corridor plans provided by Capita Symonds.
- DMRB Volume 11; Section 3, Part 6, Chapter 2.
- Stage 1 Environmental Scoping Report, Capita Symonds.

9.2.3 Methodology

Baseline Survey

Properties which require demolition for a scheme to be built can result in environmental impact. Demolition can give rise to a range of other effects including loss of facilities or amenities, loss of attractive buildings or townscape and the opening up of views for other properties previously screened. (Guidance on the assessment of townscape is provided in DMRB Volume 11, Section 3, Part 8 and Part 5 respectively). In certain cases, there may also be implications arising from the loss of all or part of business premises.

The baseline survey was carried out by using base plans provided by Capita Symonds. No walk over survey was carried out.

Definition of Scales of Impact

DMRB Volume 11, Section 3, Part 6, Chapter 2 does not prescribe scales of impact for loss of private property. The manual however, recommends that the objective at this stage is to estimate the number of properties at risk of demolition.

In all cases of property at risk of demolition, the receptor is assessed as having high sensitivity and consequently the resultant impact is considered to be of the highest significance or large adverse impact, based on the suggested seven point textual scale.

SCALE	IMPACT
Large/Significant Adverse	Direct loss of land/demolition of property/business facilities.
Moderate Adverse	Partial loss of land, loss of access/parking, loss of amenity for property/business facilities.
Low/Slight Adverse	Indirect/insignificant or temporary loss of amenity, land or access/parking for property/business facilities.
Neutral	No change.
Low/Slight Beneficial	Indirect improvement of property/business facilities (e.g. landscape screening).
Moderate Beneficial	Off-site improvement of property/business facilities (e.g. improved access)
Large/Significant Beneficial	Direct improvement of property/business facilities (e.g. provision of landscape works, increase in land).

9.2.4 Development of Possible Mitigation Measures

Where property or land is required to build a scheme, compensation due to owners and occupiers is included in the economic appraisal.

Design has not progressed to a point where detailed mitigation measures can be presented. At this stage, generic mitigation measures are proposed where necessary and are assumed to be appropriate based on the information available.

9.2.5 Assessment of Impacts

At stage 1, route corridors will not be sufficiently developed to allow more than a very broad estimate of properties potentially at risk, other than where the only options are for on-line widening. A schedule showing properties at risk of demolition, or from which land may need to be taken for each route corridor, will be provided. Direct loss of private property is always assessed as 'large adverse' where the owner/occupier is permanently deprived of their property.

9.2.6 Limitations to Surveys or Assessments

The assessment of impacts of land used by the community has been limited to an analysis of base plans prepared by CAPITA Symonds. Baseline data has been restricted to a desktop study, therefore limiting information from which to make assessments. Due to the requirements of a Stage 1 Assessment; there is limited information regarding land take, cuttings, embankments and construction activities etc. Therefore, it is not possible with this degree of accuracy to establish the exact extent of land take and this will be ascertained at the detailed design stage. Without detailed proposals and field data, it is not possible to put forward detailed mitigation proposals. However, the mitigation measures, which have been suggested, are thought to be appropriate based on the information available. Within the timeframe it has not been possible to agree the mitigation proposals with the Highways Agency, therefore these measures may be subject to future modification and development. Construction impacts are not assessed in this report as information regarding the construction activities is inappropriate at this stage of the study.

The impact of agricultural land take will be assessed in chapter 12.

9.2.7 Assumptions in the Assessment

At this stage, route corridors are not sufficiently developed to allow more than a very broad estimate of properties at risk of demolition, other than where the only options are for on-line widening. Off-line route corridor estimates of properties at risk of demolition are purely an assumption at this stage.

Without a site visit, it is assumed that all private property is occupied and commercial/industrial property is operational. In addition, it is also difficult to estimate the extent of buildings affected without a site visit therefore impacts are all assumptions at this stage.

It is assumed that the buildings mentioned at Outgang Plantation are forestry sheds or garages containing various pieces of forestry machinery.

9.3 The Base Line Conditions of Section 1

The Base Line Conditions Section 1 from York Bypass (at A1237 Hopgrove junction) to Malton Bypass (at B1248 Musley Bank Junction)

The route corridor being studied is located in an essentially rural area with an emphasis on agriculture. A combination of isolated properties, small clusters of houses and large villages line the route corridor of the A64 and include Barton Hill, Whitwell-on-the-Hill, Crambeck, Malton and Stockton-on-the-forest. Arable and Pasture farming dominate the area within this route corridor. Between Stockton Lane and the A64, just to the north of Stockton-on-the-forest, a significant area of the land is occupied by a golf course. A point-to-point racecourse is located between Barton Hill and Whitwell Village.

9.3.1 The Legislative Framework Section 1 from York Bypass (at A1237 Hopgrove junction) to Malton Bypass (at B1248 Musley Bank Junction)

Planning permission may be required to demolish a building, particularly if it included on a list of buildings of special historical interest, within a conservation area or a house or building containing a residential home or hotel. Effects on buildings of historical interest will be assessed in Section 6 'Cultural Heritage' and demolition impacts will be assessed in this section. The following pieces of legislation are relevant to this nature of this assessment:

- **Highways Act 1980**, Section 257 refers to compulsory acquisition and states that an order can be made in the exercise of highway land acquisition powers for the purpose of enabling one or more of the orders and schemes to be implemented when it becomes operative, or for a purpose connected with a highway.
- **Land Compensation Act 1961**: to make provision for the assessment of compensation in respect of compulsory acquisitions of interests in land.
- **The Town and Country Planning Act 1990**, section 226 states that, 'In justifying the compulsory purchase of private property for planning purposes, there needs to be a degree of certainty that the intended scheme will proceed and the owners will not be deprived of the property without good reason'.

9.3.2 Scheme Description of Section 1

Section 1 from York Bypass (at A1237 Hopgrove junction) to Malton Bypass (at B1248 Musley Bank Junction)

The majority of the route corridor for section 1 is online with the existing A64. Occasionally, the route corridor remains on-line but aligns slightly to the east or to the west. Similarly, the route corridor moves off-line in several locations. Commencing at the York junction, the route corridor moves off line to accommodate the roundabout and dual carriageway where the section commences at the A64/A1036 junction. At Hazelbush Farm, the route corridor deviates slightly south of the existing A64, rejoining near High Lodge Farm. A short stretch of route corridor moves slightly north of the existing carriageway between the Hutton Hill property's junction with the A64 and High Hutton. The last section of the route corridor moves offline to the north at the point of the Sawkill Farm junction, until the route corridor terminates at the Malton junction.

9.4 Identification of Impacts of Section 1

9.4.1 Section 1 from York Bypass (at A1237 Hopgrove junction) to Malton Bypass (at B1248 Musley Bank Junction)

Property at risk of demolition within this on-line route corridor includes:

- Fourth Milestone Cottage, Stockton-on-the-forest;
- Land take from Hazelbush Farm, Hazelbush Farm;
- High Lodge, Hazel Bush;
- Spittal Beck Filling Station;
- Bar Farm (between High Hutton and Malton).

9.5 Possible Mitigation Measures of Section 1

9.5.1 Section 1 from York Bypass (at A1237 Hopgrove junction) to Malton Bypass (at B1248 Musley Bank Junction)

- Provide compensatory land to Spittal Beck Filling Station
- Provide appropriate compensation in line with Highways Act (1980), Land Compensation Act 1961 and Town and Country Planning Act (1990) to people who have permanently lost their property.

9.6 Impact Assessment of Section 1

9.6.1 Section 1 from York Bypass (at A1237 Hopgrove junction) to Malton Bypass (at B1248 Musley Bank Junction)

- The scheme is likely to result in the demolition of the Fourth Milestone Cottage; therefore this impact is assessed as large adverse.
- Loss of land at Hazelbush Farm is assessed as moderate adverse. The agricultural impact will be assessed in the agricultural section.
- Loss of the High Lodge property at Hazelbush is assessed as large adverse.
- Partial loss of Spittal Beck Filling Station forecourt is assessed as moderate adverse.
- Demolition of several farm buildings at Bar Farm is assessed as large adverse.

9.7 Summary of Section 1

9.7.1 Section 1 from York Bypass (at A1237 Hopgrove junction) to Malton Bypass (at B1248 Musley Bank Junction)

ROUTE CORRIDOR	LARGE ADVERSE	MODERATE ADVERSE	SLIGHT ADVERSE	NEUTRAL	SLIGHT BENEFICIAL	MODERATE BENEFICIAL	LARGE BENEFICIAL	TOTAL
ONLINE	3 (60%)	2 (40%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	5

Table 2: Impacts of online and offline route corridors on private property and associated land take for section 1.

The online route corridor for section 1 results in 3 large adverse impacts and 2 moderate adverse impacts. The most significant impacts in relation to this online route corridor is the direct loss of buildings. Direct loss of private property is always assessed as large adverse if it permanently deprives the owner of their property and compensation is the only alternative. The only impact in relation to land take is at Hazelbush Farm. There will be no land take from the golf course near Stockton or the point-to-point racecourse east of Whitwell on the Hill. The agricultural effect of this impact is assessed in section 12.

9.7.2 Limitations and Assumptions of Section 1 from York Bypass (at A1237 Hopgrove junction) to Malton Bypass (at B1248 Musley Bank Junction)

Assessment of private property affected by the scheme is a very broad estimate at this stage. No site visit has taken place which has made it difficult to establish the exact extent of impacts. Further development of design including details of land take, cuttings, embankments and construction activities at stage 2 will allow for a more detailed assessment of impacts.

Potential Further Mitigation of Section 1 from York Bypass (at A1237 Hopgrove junction) to Malton Bypass (at B1248 Musley Bank Junction)

No further mitigation is proposed at this stage.

9.8 The Base Line Conditions of Section 2

The Base Line Conditions Section 2 from Malton Bypass (at Brambling Fields) to Seamer Bypass (at Seamer Carr)

The study area is predominately agricultural, comprising both arable and pasture land. Small groups of houses and isolated farms are scattered either side of the A64, with villages in between which include Rillington, Sherburn and smaller villages such as Scagglethorpe and West Knapton. Most properties are either residential or farmsteads scattered along the route, with a mixture of commercial and residential within the larger villages. Ganton Golf course and clubhouse occupy a significant area of land to the north between Potter Brompton and Ganton. To the south of this area and of the A64, a small area of recreational ground exists near the village of Ganton.

9.8.1 The Legislative Framework Section 2 from Malton Bypass (at Brambling Fields) to Seamer Bypass (at Seamer Carr)

Planning permission may be required to demolish a building, particularly if it included on a list of buildings of special historical interest, within a conservation area or a house or building containing a residential home or hotel. Effects on buildings of historical interest will be assessed in Section 4 ‘Cultural Heritage’ and demolition impacts will be assessed in this section.

Highways Act 1980, Section 257 refers to compulsory acquisition and states that an order can be made in the exercise of highway land acquisition powers for the purpose of enabling one or more of the orders and schemes to be implemented when it becomes operative, or for a purpose connected with a highway.

Land Compensation Act 1961: to make provision for the assessment of compensation in respect of compulsory acquisitions of interests in land.

The Town and Country Planning Act 1990, section 226 states that, ‘In justifying the compulsory purchase of private property for planning purposes, there needs to be a degree of certainty that the intended scheme will proceed and the owners will not be deprived of the property without good reason’.

9.9 Scheme Description of Section 2

9.9.1 Section 2 from Malton Bypass (at Brambling Fields) to Seamer Bypass (at Seamer Carr)

Online Route

The proposed route corridor begins just east of Brambling Fields, online with the existing A64. It continues online until it passes Willow Farm where it moves in a northerly direction passed Rillington Fields. At this point, the route corridor deviates south crossing the existing A64 via an over-bridge before continuing to the south of Rillington Village. The route continues in a similar direction through a number of plantations, running almost adjacent to Sands Lane. The route corridor crosses the existing A64 near Mill House before moving in a northerly direction along the outskirts West Heselton before sweeping south around the outskirts of East Heselton. The route corridor runs almost online for a short time before swinging to the south of Sherburn and rejoining the existing A64 once again at Potter Brompton. Continuing in a northeasterly direction, the route corridor traverses a number of fields before running almost parallel with the railway line and crosses the River Derwent before re-connecting to the Seamer Bypass.

Offline Route

This route takes a northerly direction commencing at the Malton bypass at Brambling Fields. To the east of Scagglethorpe Grange the route corridor changes in a northeasterly direction following the same alignment as the railway line for the most part. Occasionally the route corridor moves further south in order to accommodate junctions where existing roads are crossed.

9.10 Identification of Impacts of Section 2

9.10.1 Section 2 from Malton Bypass (at Brambling Fields) to Seamer Bypass (at Seamer Carr)

Online Route

Property at risk of demolition within this online route corridor includes:

- Farm Buildings at Willow Farm, Scagglethorpe;
- Underbrow, Scagglethorpe;
- Underbrow Farm, Scagglethorpe;
- West Lea, Scagglethorpe;
- Buildings at Knapton Quarry;
- A pumping station south east of Sherburn;
- A pumping station north west of Potter Brompton;
- The Hollies, south of Binnington;
- One, possibly two buildings at Outgang Plantation, south of Rillington.

Offline Route

The offline route corridor could potentially result in the loss of a significant area to the north of Ganton Golf course.

9.11 Possible Mitigation Measures of Section 2

9.11.1 Section 2 from Malton Bypass (at Brambling Fields) to Seamer Bypass (at Seamer Carr)

- Re-site affected pumping stations.
- Re-site the affected buildings at Knapton Quarry.
- Provide appropriate compensation in line with Highways Act (1980), Land Compensation Act 1961 and Town and Country Planning Act (1990) to people who have permanently lost their property.
- Provide compensatory land to Ganton Golf course, if detailed design proves to result in land take for the scheme.

9.12 Impact Assessment of Section 2

9.12.1 Section 2 from Malton Bypass (at Brambling Fields) to Seamer Bypass (at Seamer Carr)

Online Route

- The affect of the scheme on several farm buildings at Willow Farm is assessed as large adverse.
- Demolition of Underbrow, Scagglethorpe is assessed as large adverse.
- The loss of several farm buildings at Underbrow farm is assessed as large adverse.
- The scheme is likely to result in a large adverse impact on West Lea, Scagglethorpe.

- It is likely that the buildings affected at Knapton Quarry are temporary buildings which could be re-sited, therefore the impact is assessed as moderate adverse.
- A moderate adverse assessment has been made for the loss of the pumping station, south east of Sherburn. It is likely that this pumping station can be re-sited.
- The loss of the pumping station north west of Potter Brompton has been assessed as moderate adverse. It is likely that this can be re-sited.
- Loss of grounds at The Hollies is considered to be a moderate adverse impact.
- Loss of unidentified buildings in Outgang Plantation is identified as moderate adverse as it is likely that these buildings could be re-sited elsewhere in the plantation.

Offline Route

Partial loss of Ganton golf course has been assessed as moderate adverse.

9.13 Summary of Section 2

Section 2 from Malton Bypass (at Brambling Fields) to Seamer Bypass (at Seamer Carr)

The following table illustrates the impacts of the online and offline route corridors for section 2.

ROUTE CORRIDOR	LARGE ADVERSE	MODERATE ADVERSE	SLIGHT ADVERSE	NEUTRAL	SLIGHT BENEFICIAL	MODERATE BENEFICIAL	LARGE BENEFICIAL	TOTAL
ONLINE	4 (44%)	5 (56%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	9
OFFLINE	0 (0%)	1 (100%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	1

Table 3: Impacts of online and offline route corridors on private property and associated land take for section 2.

The online route corridor for section 2 results in 4 large adverse impacts and 5 moderate adverse impacts. The online route corridor has significantly greater impact than the offline route corridor. Most impacts are in relation to the direct loss of buildings with few impacts regarding associated land take. The most significant impact of this section of the scheme is the loss of two residential properties and several farm buildings at both Willow Farm and Underbrow Farm. This occurs during a section of online widening north east of Scagglethorpe where the affected buildings are immediately adjacent to the existing A64. A small section of the grounds of the Hollies will be lost as a result of the scheme. The remaining effects are all in relation to commercial property and have been assessed based on the assumption that alternative sites for buildings lost can be provided. The online route corridor will not result in land take or demolition of buildings at Ganton Golf Course.

The offline route corridor could potentially result in land take from Ganton Golf course. The extent of this impact can only be established once detailed design has progressed to a point where an estimate of land take can be made.

9.13.1 Limitations and Assumptions of Section 2 from Malton Bypass (at Brambling Fields) to Seamer Bypass (at Seamer Carr)

Assessment of private property affected by the scheme is a very broad estimate at this stage. No site visit has taken place, which has made it difficult to establish the exact extent of

impacts. Further development of design including details of landtake, cuttings, embankments and construction activities at stage 2 will allow for a more detailed assessment of impacts.

9.13.2 Potential Further Mitigation of Section 2 from Malton Bypass (at Brambling Fields) to Seamer Bypass (at Seamer Carr

No further mitigation is required at this stage.

9.14 Overall Summary

The most significant impact as a result of the A64 Dualling scheme from York to Scarborough in relation to this particular assessment is the direct loss of an estimated 13 private properties across the entire length of the scheme. It is possible that mitigation could compensate for the loss of some of these properties, particularly the non-residential property. Online route corridors result in the most significant impacts, especially in areas where it is not possible to bypass properties that lie immediately adjacent to the existing A64, which is more pertinent in section 2.

10 LAND USE – LOSS OF LAND USED BY THE COMMUNITY

10.1 Introduction

This section assesses the impact of the loss of land used by the community associated with the scheme.

Community land may have conservation, landscape or other heritage value. These issues will be assessed separately in the Ecological, Cultural Heritage or Landscape sections.

This report is concerned with the following factors:

- Common land;
- Town or Village Greens;
- Fuel and Field Garden Allotments;
- Public Open Space;
- Doorstep Greens;
- Open Land

10.2 Assessment Techniques and Methodology

10.2.1 Guidelines

In accordance with the guidance presented in *DMRB Volume 11*, Section 3, Part 6, effects on community land have been assessed using previously published reports, 1:10,000 plans and information provided by local authorities.

10.2.2 References

Reference has been made to the following reports and websites:

- DMRB Volume 11; Section 3, Part 6, Chapter 3.
- Stage 1 Environmental Scoping Report, Capita Symonds.
- Countryside Agency Website, Doorstep Greens, www.countryside.gov.uk/Countrysidefortowns/doorstep_greens/, accessed 14th December 2004.
- Countryside Agency Website; Maps of Registered Common Land and Open Country. <http://www.ca-mapping.co.uk/mapping/regional>, accessed 14th December 2004.
- Department for Environment, Food and Rural Affairs (DEFRA) Website, <http://www.defra.gov.uk/accessed> 14th December 2004.
- Multi Agency Geographic Information for the Countryside <http://www.magic.gov.uk> accessed 14th December 2004.

10.2.3 Methodology

Baseline Survey

The following areas of land used by the community were examined as part of this study:

- **Common Land:** is defined as ‘land subject to rights of common’ or ‘waste land of a manor not subject to rights of common’. A right of common is a right to take from land, of which one is not the owner, one or more of the land’s natural products. Common land is land owned by one person over which another is entitled to exercise rights of common (such as

grazing animals or cutting bracken for livestock bedding), and these rights are generally exercisable in common with others. There is no single definition of the term ‘common land’, or indeed ‘common’ or ‘common rights’. Common land comprises some 545,000 hectares, which is about 4% of the total land area in England and Wales.

- **Town or Village Green:** is a category of common land defined as ‘land which has been allotted by or under any Act for the exercise or recreation of the inhabitants of any locality or on which the inhabitants of any locality have a customary right to indulge in lawful sports or pastimes, or on which the inhabitants of any locality have indulged in such sports and pastimes as of right for not less than 20 years’.
- **Fuel and Field Garden Allotments:** consist of land that was allotted for public or semi public purposes under the enclosure acts. It is not technically common land but is held in trust by its owner and generally falls under the jurisdiction of the Charity Commissioners
- **Public Open Space:** is defined as any land laid out as a public garden or used for the purposes of public recreation or any land being a disused burial ground. It usually belongs to a local authority or is held as a charitable trust. It should be on the local planning authority register along with common land and village greens and identified in Local Plans.
- **Doorstep Greens:** The Doorstep Greens Initiative provides new or renovated areas of public open space close to people's homes that could be enjoyed permanently by the local community. The project is a joint Countryside Agency and New Opportunities Fund Project aimed at targeting communities who experience disadvantage and where regeneration is required. Examples of Doorstep Greens include:
 - a grassy events area and nature garden with banks of wild flowers;
 - a small orchard of fruit trees
 - a new footpath across the Green that links to the bus stop;
 - a circle of rock seats carved with local children's designs;
 - level grassy area that can be used for community events and ball games;
 - a play space with animal sculptures and nearby seating.
- **Open Country:** land shown on a conclusive map of open country (i.e., land consisting wholly or predominately of mountain, moor, heath or down) this excludes areas of common land.

The Countryside Agency website (<http://www.ca-mapping.co.uk/mapping/regional>) provided details of all registered common land and open country in the study area. The website also provided information on the location and status of Doorstep Greens within the study area.

10.2.4 Definition of Scales of Impact

No standard method of measuring impact is available in DMRB Volume 11 for assessing loss of land used by the community. For the purposes of this project, the following 7-point scale has been devised:

SCALE	DEFINITION
Large/Significant Adverse	Direct loss of land used by the community.
Moderate Adverse	Partial loss of land used by the community.
Low/Slight Adverse	Indirect/Insignificant or temporary loss of land used by the community.
Neutral	No impact on land used by the community.

Low/Slight Adverse	Indirect improvement of land used by the community (e.g. improved access).
Moderate Adverse	Off-site improvement of land used by the community (e.g. improved access).
Large/Significant Adverse	Direct improvement of land used by the community (e.g. provision of landscape works, increase in land).

10.3 Development of Mitigation Measures

Land taken for a road scheme from land used by the community will usually be compensated with exchange land of equal or greater size to the land taken. Where exchange land is required, the impacts arising from that land should also be included in the assessment. If the assessment identifies land take from public open space, then land exchange in the vicinity of that taken, will be offered as part of the mitigation proposals. Compensatory land offered will be no smaller than the land required for the preferred route and will be of equal benefit to the user.

Design has not progressed to a point where detailed mitigation measures can be presented. At this stage, generic mitigation measures are proposed where necessary and are assumed to be appropriate based on the information available.

10.3.1 Assessment of Impacts

Information on land used by the community was obtained from the local planning authority. *DMRB* Volume 11 states in Section 3, Part 6, Chapter 3, paragraph 3.9 that all public open space, common land and village greens should be held on the Local Planning Authority Register. The introduction of the Countryside and Rights of Way Act (CROW) 2000 has meant that the Countryside Agency now prepares all maps of registered common land and open country. The CROW Act 2000 does not require the Agency to show Village Greens under the 1965 Commons Act. This information was obtained from the relevant Local Plans and comments received back from the statutory Consultees during the scoping exercise helped to identify any village greens in the study area.

This information was then plotted onto a base plan and assessed in accordance with the scale of impacts prescribed in section 2.3.2 above.

10.3.2 Limitations to Surveys or Assessments

The assessment of impacts of land used by the community has been limited to an analysis of base plans prepared by Capita Symonds. Baseline data has been restricted to a desktop study, therefore limiting information from which to make assessments. Due to the requirements of a Stage 1 Assessment; there is limited information regarding land take, cuttings, embankments and construction activities etc. Therefore, it is not possible with this degree of accuracy to establish the exact extent of land take and this will be ascertained at the detailed design stage.

Without detailed proposals and field data, it is not possible to put forward detailed mitigation proposals. However, the mitigation measures, which have been suggested, are thought to be appropriate based on the information available. Within the timeframe it has not been possible to agree the mitigation proposals with the Highways Agency, therefore these measures may be subject to future modification and development.

DMRB states in Section 3, Part 6, Chapter 3, paragraph 3.9 that all public open space, common land and village greens will be held by the local planning authority on the local planning authority register. The introduction of the Countryside and Rights of Way Act 2000 has meant that the Countryside Agency now prepares all maps of registered common land and open country. Open country and Doorstep Greens are not included in the requirements of DMRB, however for the purposes of this assessment they are considered to be areas of land which would be used by the community.

Construction impacts are not assessed in this report as information regarding construction activities is inappropriate at this stage of the study.

10.4 Assumptions in the Assessment

No assumptions have been made in this assessment.

10.5 The Base Line Conditions of Section 1

10.5.1 The Base Line Conditions Section 1 from York Bypass (at A1237 Hopgrove junction) to Malton Bypass (at B1248 Musley Bank Junction)

The route corridor being studied is located in an essentially rural area with an emphasis on agriculture. A combination of isolated properties, small clusters of houses and large villages line the route corridor of the A64 and include Barton Hill, Whitwell-on-the-Hill, Crambeck, Malton and Stockton-on-the-forest. Arable and Pasture farming dominate the area within this route corridor. Common Land has been identified in the vicinity of Flaxton, Harton and Barton-le-Willows however, as these are just outside the study corridor they have not been considered in the assessment. There was no evidence of Village Greens, Fuel or Field Garden Allotments, Public Open Space or Doorstep Greens. A large area of open country was identified at Towthorpe Common, just outside the route corridor. Areas of community land can be seen on drawing numbers 9053/S10.01a-c.

10.5.2 The Legislative Framework Section 1 from York Bypass (at A1237 Hopgrove junction) to Malton Bypass (at B1248 Musley Bank Junction)

DEFRA's Common land team considers applications for Secretary of State consents and approvals relating to common land and town and village greens. Various pieces of legislation relevant to this type of assessment include:

- **Commons Registration Act 1965** protects land from being redeveloped. Under the Act, all existing Commons and Town or Village Greens had to be registered. The resultant registers, which also include subsequent registrations, are maintained by the Registration Authority and contain information about the land, the owner and any rights of common. All common land is private property and is protected against enclosure or encroachment by a complicated network of legislation. Generally speaking, the consent of the Secretary of State is needed to carry out works on such land.
- **Inclosure Acts 1845 to 1882** facilitated the inclosure and improvement of Commons and Lands held in Common.
- Section 194 of the **Law and Property Act 1925** (consent to works on common land);
- Section 193 of the **Property Act 1925** (orders on limitation on access to common land where the land is subject to access under this section);
- **Countryside and Rights of Way Act 2000** makes it the duty of the Countryside Agency to prepare maps to show all registered common land and all open country in England.

10.6 Scheme Description of Section 1

10.6.1 Section 1 from York Bypass (at A1237 Hopgrove junction) to Malton Bypass (at B1248 Musley Bank Junction)

The majority of the route corridor for section 1 is online with the existing A64. Occasionally, the route corridor remains on-line but aligns slightly to the east or to the west. Similarly, the route corridor moves off-line in several locations. Commencing at the York junction, the route corridor moves off line to accommodate the roundabout and dual carriageway where the section commences at the A64/A1036 junction. At Hazelbush Farm, the route corridor deviates slightly south of the existing A64, rejoining near High Lodge Farm. A short stretch of route corridor moves slightly north of the existing carriageway between the Hutton Hill property's junction with the A64 and High Hutton. The last section of the route corridor

moves offline to the north at the point of the Sawkill Farm junction, until the route corridor terminates at the Malton junction.

10.7 Identification of Impacts of Section 1

10.7.1 Section 1 from York Bypass (at A1237 Hopgrove junction) to Malton Bypass (at B1248 Musley Bank Junction)

No impacts anticipated for land used by the community.

10.8 Possible Mitigation Measures of Section 1

10.8.1 Section 1 from York Bypass (at A1237 Hopgrove junction) to Malton Bypass (at B1248 Musley Bank Junction)

No mitigation measures are necessary for this section.

10.9 Impact Assessment of Section 1

10.9.1 Section 1 from York Bypass (at A1237 Hopgrove junction) to Malton Bypass (at B1248 Musley Bank Junction)

The scheme will not result in any impacts on land used by the community.

10.10 Summary of Section 1

10.10.1 Section 1 from York Bypass (at A1237 Hopgrove junction) to Malton Bypass (at B1248 Musley Bank Junction)

The study corridor does not pass through any land used by the community. Therefore the proposed scheme to dual the A64 between York and Malton will not impact upon any community land.

10.11 Limitations and Assumptions of Section 1 from York Bypass (at A1237 Hopgrove junction) to Malton Bypass (at B1248 Musley Bank Junction)

The assessment of impacts of land used by the community has been limited to an analysis of base plans prepared by CAPITA Symonds. Baseline data has been restricted to a desktop study, therefore limiting information from which to make assessments.

Due to the requirements of a Stage 1 Assessment; there is limited information regarding land take, cuttings, embankments and construction activities etc. Therefore, it is not possible with this degree of accuracy to establish the exact extent of land take and this will be ascertained at the detailed design stage. Without detailed proposals and field data, it is not possible to put forward detailed mitigation proposals. However, the mitigation measures, which have been suggested, are thought to be appropriate based on the information available.

Within the timeframe it has not been possible to agree the mitigation proposals with the Highways Agency, therefore these measures may be subject to future modification and development.

DMRB states in Section 3, Part 6, Chapter 3, paragraph 3.9 that all public open space, common land and village greens will be held by the local planning authority on the local planning authority register. The introduction of the Countryside and Rights of Way Act 2000

has meant that the Countryside Agency now prepares all maps of registered common land and open country.

10.12 Potential Further Mitigation of Section 1 from York Bypass (at A1237 Hopgrove junction) to Malton Bypass (at B1248 Musley Bank Junction)

No further mitigation is required for this particular issue.

10.13 The Base Line Conditions of Section 2

10.13.1 The Base Line Conditions Section 2 from Malton Bypass (at Brambling Fields) to Seamer Bypass (at Seamer Carr)

The study area is predominately agricultural, comprising both arable and pasture land. Small groups of houses and isolated farms are scattered either side of the A64, with villages in between which include Rillington, Sherburn and smaller villages such as Scagglethorpe and West Knapton. Most properties are either residential or farmsteads scattered along the route, with a mixture of commercial and residential within the larger villages. No common land or village greens were located within the study area. A small area of open country is located just south of East Heslerton. The extracts below show areas of existing open space and an allotment located within the village of Sherburn. These areas are outside the online and offline route corridors for this section. Areas of community land can be seen on drawing numbers 9053/S10.02a-c & 9053/S10.03a-c.

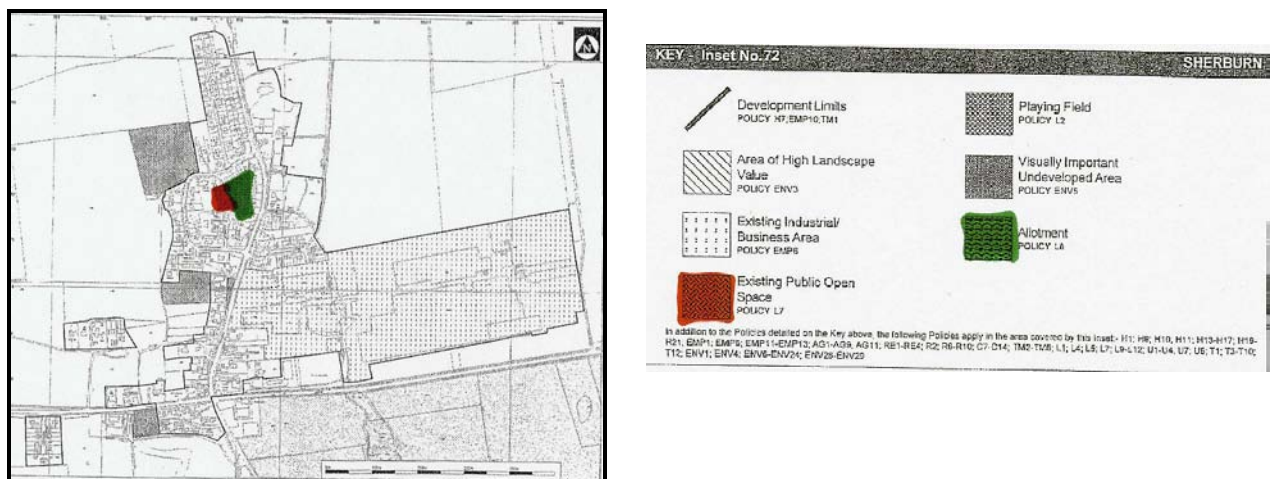


Figure 1: Extract from Ryedale District Local Plan showing an area of existing open space and an allotment, each located in the village of Sherburn.

10.14 The Legislative Framework Section 2 from Malton Bypass (at Brambling Fields) to Seamer Bypass (at Seamer Carr)

DEFRA's Common land team considers applications for Secretary of State consents and approvals relating to common land and town and village greens. Various pieces of legislation relevant to this type of assessment include:

- **Commons Registration Act 1965** protects land from being redeveloped. Under the Act, all existing Commons and Town or Village Greens had to be registered. The resultant registers, which also include subsequent registrations, are maintained by the Registration Authority and contain information about the land, the owner and any rights of common. All common land is private property and is protected against enclosure or encroachment by a complicated network of legislation. Generally speaking, the consent of the Secretary of State is needed to carry out works on such land.
- **Inclosure Acts 1845 to 1882** facilitated the inclosure and improvement of Commons and Lands held in Common.
- Section 194 of the **Law and Property Act 1925** (consent to works on common land);

- Section 193 of the **Property Act 1925** (orders on limitation on access to common land where the land is subject to access under this section);
- **Countryside and Rights of Way Act 2000** makes it the duty of the Countryside Agency to prepare maps to show all registered common land and all open country in England.

10.15 Scheme Description of Section 2

10.15.1 Section 2 from Malton Bypass (at Brambling Fields) to Seamer Bypass (at Seamer Carr)

Online Route

The proposed route corridor begins just east of Brambling Fields, online with the existing A64. It continues online until it passes Willow Farm where it moves in a northerly direction passed Rillington Fields. At this point, the route corridor deviates south crossing the existing A64 via an over-bridge before continuing to the south of Rillington Village. The route continues in a similar direction through a number of plantations, running almost adjacent to Sands Lane. The route corridor crosses the existing A64 near Mill House before moving in a northerly direction along the outskirts West Heslerton before sweeping south around the outskirts of East Heslerton. The route corridor runs almost online for a short time before swinging to the south of Sherburn and rejoining the existing A64 once again at Potter Brompton. Continuing in a northeasterly direction, the route corridor traverses a number of fields before running almost parallel with the railway line and crosses the River Derwent before re-connecting to the Seamer Bypass.

Offline Route

This route takes a northerly direction commencing at the Malton bypass at Brambling Fields. To the east of Scagglethorpe Grange the route corridor changes in a northeasterly direction following the same alignment as the railway line for the most part. Occasionally the route corridor moves further south in order to accommodate junctions where existing roads are crossed.

10.16 Identification of Impacts of Section 2

10.16.1 Section 2 from Malton Bypass (at Brambling Fields) to Seamer Bypass (at Seamer Carr)

Online Route

The route corridor encroaches onto a small area of open country, just south of East Heslerton and an area of common land north of Ganton, however as this scheme is online there will not be an impact.

Offline Route

The offline route corridor will not affect any land used by the community.

10.17 Possible Mitigation Measures of Section 2

10.17.1 Section 2 from Malton Bypass (at Brambling Fields) to Seamer Bypass (at Seamer Carr)

No mitigation measures are required for this section.

10.18 Impact Assessment of Section 2

10.18.1 Section 2 from Malton Bypass (at Brambling Fields) to Seamer Bypass (at Seamer Carr)

Online Route

No impact assessment required.

Offline Route

Impact assessment is not necessary for this route corridor.

10.19 Summary of Section 2

Section 2 from Malton Bypass (at Brambling Fields) to Seamer Bypass (at Seamer Carr)

Neither the online or offline route corridors will impact upon land used by the community.

10.20 Limitations and Assumptions of Section 2 from Malton Bypass (at Brambling Fields) to Seamer Bypass (at Seamer Carr)

Baseline data has been restricted to a desktop study, therefore there is a limited amount of information upon which to make assessments.

Assessments have been made only on route corridors and therefore there is a limited amount of information regarding land take, cuttings, embankments, construction activities etc. It is not possible with this degree of accuracy to establish the exact extent of land take and this will be ascertained at the detailed design stage.

10.21 Potential Further Mitigation of Section 2 from Malton Bypass (at Brambling Fields) to Seamer Bypass (at Seamer Carr)

No further mitigation is required.

10.22 Overall Summary

The A64 Dualling scheme between York and Malton will not impact on any land used by the community. The online and offline route corridors between Malton and Seamer will not result in loss of land used by the community.

11 LAND USE – EFFECTS ON DEVELOPMENT LAND

11.1 Introduction

This section takes into account future changes in land use due to new development likely to occur in the absence of the scheme.

11.1.1 Assessment Techniques and Methodology

11.1.2 Guidelines

In accordance with the guidance presented in DMRB Volume 11, Section 3, Part 3, future changes in land use have been assessed by an examination of planning applications provided by North Yorkshire County Council, City of York Council, Ryedale District Council and Scarborough Borough Council.

11.1.3 References

Reference has been made to the following reports, documents:

- Planning Control Records held by North Yorkshire County Council, City of York Council, Ryedale District Council and Scarborough Borough Council.
- City of York Local Plan, City of York Council, Draft Local Plan, May 1998,
- Ryedale District Local Plan, Ryedale District Council, March 2002.
- Scarborough Borough Local Plan, Scarborough Borough Council, Adopted April 1999.
- North Yorkshire County Joint Structure Plan, North Yorkshire County Council, Adopted October 1995.
- DMRB Volume 11; Section 3, Part 6, Chapter 3.
- Stage 1 Environmental Scoping Report, Capita Symonds.

11.1.4 Methodology

Baseline Survey

The baseline survey was carried out by analysing the Planning Control Records held by North Yorkshire County Council, City of York Council, Ryedale District Council and Scarborough Borough Council.

The land use planning designations and all relevant and current planning applications were identified and assessed. Each impact was scored in accordance with a set scale of impact.

Applications which are over 5 years old are presumed to be developed or expired, and have therefore not been considered in this assessment. Applications which have been granted approval within the 5 year time period may have been developed at the time of this assessment. Only applications that would be affected by the scheme were individually checked to confirm whether the development had taken place. Once the status of the development was confirmed, a decision was then made as to whether the assessment had already been considered in other sections, e.g. Visual Impact, or whether it should be assessed in this report. This was to ensure double counting of impacts was avoided.

There are certain types of planning approvals which were not considered as part of this assessment and are listed below. These types of application were discounted at an early stage

because it was clear that the scheme would not impact directly or indirectly on these proposals.

- Applications located outside the route corridor;
- Applications for change of use (applications would only be considered if physical changes were planned for a property, otherwise impacts would be considered in other assessments).
- Domestic garden sheds/porches;
- Signs;
- Domestic satellite dishes/CCTV cameras;
- Replacement windows;
- Renewal of conditions/relaxation of conditions;
- Temporary provisions;
- Re-roofing;
- Applications for extended opening times.

Definition of Scales of Impact

No standard method of measuring impact is available in *DMRB Volume 11*. For the purposes of this project the following seven-point scale has been devised for the assessment of direct impacts to properties and businesses:

SCALE	DEFINITION
Large/Significant Adverse	Direct loss of land, demolition of property or business facilities.
Moderate Adverse	Partial loss of land, loss of access or parking, loss of amenity for property or business facilities.
Low/Slight Adverse	Indirect, insignificant or temporary loss of amenity, land or access/parking for property or business facilities.
Neutral	No impact
Low/Slight Beneficial	Indirect improvement of property or business facilities (e.g. landscape screening).
Moderate Beneficial	Off-site improvement of property or business facilities (e.g. improved access).
Large/Slight Beneficial	Direct improvement of property or business facilities (e.g. provision of landscape works, increase in land).

Any indirect impacts on future development (visual or noise), identified during the study will be assessed using the scale of impact prescribed in those assessments in consultation with the relevant assessors.

11.1.5 Development of Possible Mitigation Measures

Design has not progressed to a point where detailed mitigation measures can be presented. At this stage, generic mitigation measures are proposed where necessary and are assumed to be appropriate based on the information available.

11.1.6 Assessment of Impacts

The information provided by the planning departments was then plotted onto a base plan and assessed. A site visit has not taken place. All local planning authority plans relating to the

study area were inspected. Land use designations were plotted on maps and the potential land take of the route corridor from areas which the local planning authorities had designated for future development was identified.

11.1.7 Limitations to Surveys or Assessments

The assessment of impacts of land used by the community has been limited to an analysis of base plans prepared by CAPITA Symonds. Baseline data has been restricted to a desktop study, therefore limiting information from which to make assessments. Due to the requirements of a Stage 1 Assessment; there is limited information regarding land take, cuttings, embankments and construction activities etc. Therefore, it is not possible with this degree of accuracy to establish the exact extent of land take and this will be ascertained at the detailed design stage. Without detailed proposals and field data, it is not possible to put forward detailed mitigation proposals. However, the mitigation measures, which have been suggested, are thought to be appropriate based on the information available. Within the timeframe it has not been possible to agree the mitigation proposals with the Highways Agency, therefore these measures may be subject to future modification and development. Construction impacts are not assessed in this report as information regarding construction activities is inappropriate at this stage of study.

11.1.8 Assumptions in the Assessment

No assumptions have been made in the assessment.

11.2 The Base Line Conditions of Section 1

11.2.1 The Base Line Conditions Section 1 from York Bypass (at A1237 Hopgrove junction) to Malton Bypass (at B1248 Musley Bank Junction)

The route corridor being studied is located in an essentially rural area with an emphasis on agriculture. A combination of isolated properties, small clusters of houses and large villages line the route corridor of the A64 and include Barton Hill, Whitwell-on-the-Hill, Crambeck, Malton and Stockton-on-the-forest. Arable and Pasture farming dominate the area within this route corridor. Between Stockton Lane and the A64, just to the north of Stockton-on-the-forest, a significant area of the land is occupied by a golf course. A point-to-point racecourse is located between Barton Hill and Whitwell Village.

Planning Applications

North Yorkshire County Council, City of York Council and Ryedale District Council have all been consulted to obtain up-to-date information on planning applications submitted in the last 5 years. All planning applications have been assessed and results are shown in table 1 and located on drawing numbers 9053/S11.01a-c.

The majority of planning applications for the study area consist of residential development proposals, extensions or erection of new dwellings with some conservatories. Several farm conversion approvals are located within the study corridor. A number of commercial proposals have also been made along the route including holiday cottages, letting units etc.

Development Designations

There are no land use designations within the study corridor covered by the City of York Local Plan and Ryedale District Local Plan, with the exception of conservation areas where impacts will be assessed in the Cultural Heritage section 4. An existing Industrial/Business Area has been designated in the Ryedale District Local Plan, however is located just outside the route corridor to the west of Malton.



Figure 1: Extract from Ryedale District Council showing an area designated as existing Industrial/Business Use.

11.2.2 The Legislative Framework Section 1 from York Bypass (at A1237 Hopgrove junction) to Malton Bypass (at B1248 Musley Bank Junction)

The following pieces of legislation are relevant to this study.

- The Town and Country Planning Act 1990 – sets out the procedure for Local Planning Authorities to regulate development and guide the preparation of development plans for their area.
- Planning Policy Guidance 23 – provides advice on the control of development under planning law.

11.3 Scheme Description of Section 1

11.3.1 Section 1 from York Bypass (at A1237 Hopgrove junction) to Malton Bypass (at B1248 Musley Bank Junction)

The majority of the route corridor for section 1 is online with the existing A64. Occasionally, the route corridor remains on-line but aligns slightly to the east or to the west. Similarly, the route corridor moves off-line in several locations. Commencing at the York junction, the route corridor moves off line to accommodate the roundabout and dual carriageway where the section commences at the A64/A1036 junction. At Hazelbush Farm, the route corridor deviates slightly south of the existing A64, rejoining near High Lodge Farm. A short stretch of route corridor moves slightly north of the existing carriageway between the Hutton Hill property's junction with the A64 and High Hutton. The last section of the route corridor moves offline to the north at the point of the Sawkill Farm junction, until the route corridor terminates at the Malton junction.

11.4 Identification of Impacts of Section 1

11.4.1 Section 1 from York Bypass (at A1237 Hopgrove junction) to Malton Bypass (at B1248 Musley Bank Junction)

Planning Applications

The assessment of impacts on planning applications for section 1 is considered in table 1.

Land Use Development Designations

There are no land use designations within the study corridor covered by the City of York Local Plan and Ryedale District Local Plan. An existing Industrial/Business Area has been designated in the Ryedale District Local Plan, however is located just outside the route corridor to the west of Malton. Therefore there are no impacts on land use designations identified for this section.

11.5 Possible Mitigation Measures of Section 1

11.5.1 Section 1 from York Bypass (at A1237 Hopgrove junction) to Malton Bypass (at B1248 Musley Bank Junction)

No specific mitigation measures have been proposed for this section. However, measures proposed for other issues such as planting, mounding and acoustic fencing will help reduce negative impacts on planning applications. No mitigation measures are necessary for land use designations.

11.6 Impact Assessment of Section 1

Section 1 from York Bypass (at A1237 Hopgrove junction) to Malton Bypass (at B1248 Musley Bank Junction)

SECTION	PLAN REF No	PLANNING APP NO.	SITE ADDRESS	PROPOSAL	DATE OF DECISION	IMPACT
YORK TO BARTON HILL	63	99/01100/OTH	Stockton	Conversion of farm outbuildings to form five self-contained holiday cottages.	1999	Neutral
	63	98/025998/FUL	Stockton	Conversion of farm outbuildings to form five self contained holiday cottages.	1998	Neutral
	63	01/02429/FUL	Stockton	Erection of single storey pitched roof holiday cottage.	2001	Neutral
	63	99/00733/FUL	Stockton	Erection of garden shed.	1999	Neutral
	64	01/00225/OTH	Stockton	Underpinning works at Holiday Inn Express.	2001	Neutral
	64	04/02406/FUL	Stockton	External alterations to doors and timber cladding to front and side elevations.	2004	Neutral
	65	99/02209/FUL	Stockton	Conservatory to rear.	1999	Neutral
	67	99/00017/DEX	Stockton	Single storey side extension.	1999	Neutral
	68	99/01016/FUL	Stockton	Conservatory to rear.	1999	Neutral
	69	03/02470/DEX	Stockton	Single storey side extension.	2003	Slight Adverse
	69	00/01084/FUL	Stockton	Erection of single storey pitched roof side extension.	2000	Neutral
	69	04/02221/FUL	Stockton	Proposed erection of a new glasshouse to provide an outlet for the sale of associated products for gardening and growing stock.	2004	Neutral
	70	01/00350/DOM	Stockton	1 No. New dwelling of granny annex.	2001	Slight Adverse
	70	01/00113/FUL	Stockton	Conversion and extension of existing outbuildings to form granny flat.	2001	Slight Adverse
	70	04/03858/FUL	Stockton	First floor pitched roof side extension.	2004	Neutral
	71	01/00045/REF	Stockton	Erection of single storey pitched roof extension to	2001	Neutral

				side.		
	71	00/00125/FUL	Stockton	Erection of glasshouse.	2000	Slight Beneficial
	71	01/02486/FUL	Stockton	Erection of single storey pitched roof extension to side.	2001	Slight Beneficial
	72	00/01260/FUL	Stockton	Erection of detached pitched roof garage/store.	2000	Slight Beneficial
	72	00/02669/FUL	Stockton	Erection of detached pitched roof garage/store.	2000	Slight Beneficial
	73	02/02861/FUL	Hazelbush	Erection of pitched roof first floor and two-storey side extension.	2002	Neutral
	74	04/01757/FUL	Hazelbush	Conversion of former café to offices and erection of single storey pitched roof side extension.	2004	Slight Beneficial
	75	02/02151/OTH	Hazelbush	Single storey fast food outlet.	2002	Slight Beneficial
	75	02/00805/FUL	Hazelbush	Erection of restaurant with associated car parking and landscaping.	2002	Slight Beneficial
	76	02/00168/OTH	Stockton	Toilet and shower block to caravan park.	2002	Neutral
	76	01/01718/OTHDFP	Stockton	Conversion of outbuildings to Holiday Cottages.	2001	Neutral
	76	01/02616/FUL	Stockton	Formation of two holiday letting units.	2001	Neutral
	76	04/03190/AGNOT	Stockton	Erection of agricultural building.	2004	Neutral
	66	04/03131/FUL	Stockton	Formation of 7m high acoustic/screening bund using imported soil/subsoil with landscaping.	2004	Neutral
BARTON HILL TO MALTON	61	04/00392/FUL	The Hollies, Old York Road, Whitwell on the Hill	Erection of sun room.	24/05/2004	Neutral

Table 1: The assessment of impacts on planning applications for section 1.

11.7 Summary of Section 1

11.7.1 Section 1 from York Bypass (at A1237 Hopgrove junction) to Malton Bypass (at B1248 Musley Bank Junction)

Route Corridor	Large Adverse	Moderate Adverse	Slight Adverse	Neutral	Slight Beneficial	Moderate Beneficial	Large Beneficial	TOTAL
On-line	0 (0%)	0 (0%)	3 (10%)	20 (67%)	7 (23%)	0 (0%)	0 (0%)	30

Table 2: Summary of impacts of section 1.

This scheme results in 3 slight adverse impacts, 20 neutral impacts and 7 slight adverse impacts. 67% of impacts are balanced at neutral.

In areas where this route corridor passes close to future development they are likely to encounter indirect effects including a reduction in air quality, an increase in traffic noise and vibration, and an increase in visual impact. Future development located away from the existing A64 is unlikely to encounter any negative effects of this online widening scheme.

There will be no impact on Development Land identified in the relevant local plans for the area.

11.7.2 Limitations and Assumptions of Section 1 from York Bypass (at A1237 Hopgrove junction) to Malton Bypass (at B1248 Musley Bank Junction)

The cut off date for the consideration of planning applications for this section in this assessment depended on when results of the search were received from the relevant planning authorities. In this case they were as follows:

- North Yorkshire County Council – 30th November 2004
- City of York Council – 18th December 2004
- Ryedale District Council – August 2004.

Any applications that were submitted after these dates have not been considered in this assessment. The decisions were not always stated in the information provided by the planning authorities, therefore for the purpose of this stage 1 assessment, they are all assumed approved. Outline planning applications have not been considered in this assessment. Impacts during the construction period have not been assessed.

11.8 Potential Further Mitigation of Section 1 from York Bypass (at A1237 Hopgrove junction) to Malton Bypass (at B1248 Musley Bank Junction)

No further mitigation is necessary at this stage for development land.

11.9 The Base Line Conditions of Section 2

11.9.1 The Base Line Conditions Section 2 from Malton Bypass (at Brambling Fields) to Seamer Bypass (at Seamer Carr)

The study area is predominately agricultural, comprising both arable and pasture land. Small groups of houses and isolated farms are scattered either side of the A64, with villages in between which include Rillington, Sherburn and smaller villages such as Scagglethorpe and West Knapton. Most properties are either residential or farmsteads scattered along the route, with a mixture of commercial and residential within the larger villages.

Planning Applications

North Yorkshire County Council, City of York Council and Ryedale District Council have all been consulted to obtain up-to-date information on planning applications submitted in the last 5 years. All planning applications have been assessed and results are shown in table 2 and located on drawing numbers 9053/S11.02a-c & 9053/S11.03a-c.

The majority of planning approvals for the study area consist of residential development proposals, extensions or alterations to existing residential dwellings, e.g. conservatories or extensions. There are also several approvals for agricultural proposals, e.g. erection of new storage sheds or multi-purpose barns. A small number of applications have been approved for commercial and retail use. The online route corridor has more planning approvals than the offline route corridor.

Development Designations

The Ryedale District and Scarborough Borough Local Plans cover this section of the scheme. The Ryedale District Local Plan identifies an area of existing Industrial/Business Area located within Sherburn. This development designation is outside both route corridors for the Malton to Seamer Section. Scarborough Borough Local Plan has not identified any development designations in the study areas. The other areas identified by the key are assessed in other sections, e.g. Ecology and Nature Conservation and Landscape Character etc.

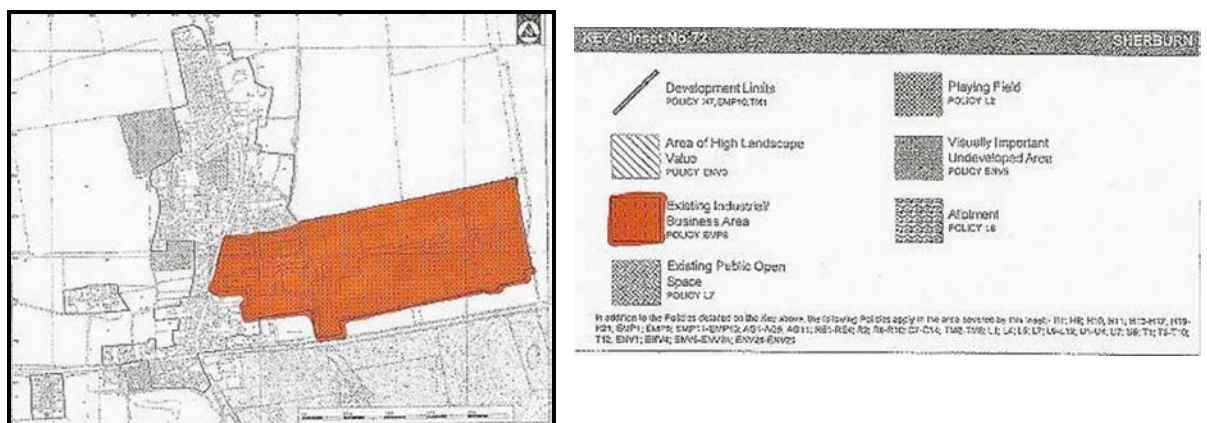


Figure 2: Showing extract from Ryedale District Local Plan. Area in red show the Existing Industrial/Business Area located within Sherburn.

11.9.2 The Legislative Framework Section 2 from Malton Bypass (at Brambling Fields) to Seamer Bypass (at Seamer Carr)

The following pieces of legislation are relevant to this study:

The Town and Country Planning Act 1990 – sets out the procedure for Local Planning Authorities to regulate development and guide the preparation of development plans for their area.

Planning Policy Guidance 23 – provides advice on the control of development under planning law.

11.10 Scheme Description of Section 2

11.10.1 Section 2 from Malton Bypass (at Brambling Fields) to Seamer Bypass (at Seamer Carr)

Online Route

The proposed route corridor begins just east of Brambling Fields, online with the existing A64. It continues online until it passes Willow Farm where it moves in a northerly direction passed Rillington Fields. At this point, the route corridor deviates south crossing the existing A64 via an over-bridge before continuing to the south of Rillington Village. The route continues in a similar direction through a number of plantations, running almost adjacent to Sands Lane. The route corridor crosses the existing A64 near Mill House before moving in a northerly direction along the outskirts West Heselton before sweeping south around the outskirts of East Heselton. The route corridor runs almost online for a short time before swinging to the south of Sherburn and rejoining the existing A64 once again at Potter Brompton. Continuing in a northeasterly direction, the route corridor traverses a number of fields before running almost parallel with the railway line and crosses the River Derwent before re-connecting to the Seamer Bypass.

Offline Route

This route takes a northerly direction commencing at the Malton bypass at Brambling Fields. To the east of Scagglethorpe Grange the route corridor changes in a northeasterly direction following the same alignment as the railway line for the most part. Occasionally the route corridor moves further south in order to accommodate junctions where existing roads are crossed.

11.11 Identification of Impacts of Section 2

11.11.1 Section 2 from Malton Bypass (at Brambling Fields) to Seamer Bypass (at Seamer Carr)

Online Route

Planning Applications

The assessment of impacts on planning applications for section is considered in table 3.

Land Use Designations

No land use designations were identified within the online route corridor.

Offline Route

Planning Applications

The assessment of impacts on planning applications for section is considered in table 4.

Land Use Designations

No land use designations were identified within the offline route corridor.

11.12 Possible Mitigation Measures of Section 2

11.12.1 Section 2 from Malton Bypass (at Brambling Fields) to Seamer Bypass (at Seamer Carr)

No specific mitigation measures have been proposed for this section. However, measures proposed for other issues such as planting, mounding and acoustic fencing will help reduce negative impacts on planning applications. No mitigation measures are necessary for land use designations.

11.13 Impact Assessment of Section 2

11.13.1 Section 2 from Malton Bypass (at Brambling Fields) to Seamer Bypass (at Seamer Carr)

See **table 3** below for online route corridor impacts and **table 4** for offline route corridor impacts.

SECTION	PLAN REF No	PLANNING APP NO.	SITE ADDRESS	PROPOSAL	DECISION	DATE OF DECISION	IMPACT
BRAMBLING FIELDS TO KNAPTON	1	00/01022/REM	Corner Farm West Knapton Malton North Yorkshire	Erection of special-needs bungalow	PER	19/10/2000	Large Beneficial
	2	00/00246/FUL	Archways Main Street Scagglethorpe Malton North Yorkshire YO17 8DT	Change of use, alteration and extension of outbuildings to form a single-storey dwelling (revised details to approval 97/00189/FUL dated 23/04/9 - insertion of dormer windows to east elevation)	PER	05/04/2000	Neutral
	3	00/00255/AGNOT	Brow Farm Village Street Scagglethorpe Malton YO17 8DU	Erection of a general-purpose agricultural building	DET	13/04/2000	Neutral
	4	00/00527/FUL	Jesmond House Village Street Scagglethorpe Malton YO17 8DU	Alterations and extensions to rear	PER	12/06/2000	Neutral
	5	01/00347/FUL	Manor Lodge Scagglethorpe Malton North Yorkshire YO17 8DU	Erection of a detached bungalow	PER	20/08/2001	Neutral
	6	01/00482/FUL	Beck House Scagglethorpe Malton North Yorkshire YO17 8ED	Formation of new access and roadway	PER	07/08/2001	Slight Adverse
	7	01/00880/FUL	Archways Main Street Scagglethorpe Malton North Yorkshire YO17 8DT	Erection of attached garage, pitched roof to existing garage and balcony on west elevation of dwelling	PER	17/10/2001	Neutral
	8	01/01222/FUL	Delamere House Main Street Scagglethorpe Malton North Yorkshire YO17 8DT	Erection of two storey extension to rear	PER	24/12/2001	Neutral

9	01/01284/FUL	The Cringles Scagglethorpe Malton North Yorkshire YO17 8DZ	Erection of conservatory to rear	PER	21/01/2002	Slight Adverse
10	02/01195/FUL	Dovecote Cottage Main Street Scagglethorpe Malton North Yorkshire YO17 8DT	Erection of two-storey extension to rear	PER	10/02/2003	Neutral
11	03/00478/FUL	Thorpe Cottages 1 Scagglethorpe Malton North Yorkshire YO17 8ED	Erection of two-storey extension	PER	31/07/2003	Slight Adverse
12	03/00995/FUL	Scagglethorpe Manor Farm Main Street Scagglethorpe Malton North Yorkshire	Change of use of agricultural building to form retail antiques warehouse with associated parking/loading unloading area and siting of two storage containers	PER	05/02/2004	Neutral
13	03/01303/FUL	Scagglethorpe Manor Main Street Scagglethorpe Malton North Yorkshire YO17 8DT	Erection of summer house (retrospective application)	PER	05/02/2004	Slight Adverse
13	03/01304/LBC	Scagglethorpe Manor Main Street Scagglethorpe Malton North Yorkshire YO17 8DT	External and internal alterations	PER	28/01/2004	Neutral
14	04/00132/OUT	Meadow View Main Street Scagglethorpe Malton North Yorkshire YO17 8DU	Erection of two detached bungalows and garages	PER	31/03/2004	Slight Adverse
15	04/00248/FUL	The Cringles Scagglethorpe Malton North Yorkshire YO17 8DZ	Erection of two-storey extension and front porch	PER	29/04/2004	Slight Adverse

	16	04/00505/FUL	Thanet Cottage Main Street Scagglethorpe Malton North Yorkshire YO17 8DT	Erection of first floor extension to rear	PER	29/06/2004	Neutral
	6	04/00617/FUL	Beck House Scagglethorpe Malton North Yorkshire YO17 8ED	Change of use and alteration of retail shop to offices and to agricultural buildings to form retail shop and associated storage warehouse	PER	30/07/2004	Neutral
	17	04/00637/AGNOT	Brow Farm Village Street Scagglethorpe Malton North Yorkshire YO17 8DU	Erection of agricultural building for storage and housing of livestock	DET	25/06/2004	Neutral
	18	04/00696/FUL	Delamere House Main Street Scagglethorpe Malton North Yorkshire YO17 8DT	Replacement of flat roof with pitched roof	PER	22/07/2004	Neutral
	44	C3/114/12G/FA	Knapton Quarry, nr East Knapton	2.94 hectare extension to chalk quarry and restoration of resultant void to original ground level via landfill with controlled wastes.			Neutral
	59	C3/02/01200/CPO	Knapton Quarry, nr East Knapton	Waste transfer building, storage area and office.			Neutral
KNAPTON TO SHERBURN	19	00/00851/FUL	43 West Garth, Sherburn	Erection of conservatory to front elevation	PER	16/08/2000	Neutral
	20	00/01001/FUL	The Old School House, St Hilda's Street, Sherburn	Erection of detached double garage.	PER	18/09/2000	Neutral
	21	00/01064	Land Adjacent No.52 St Hilda's Street Sherburn Malton North Yorkshire	Erection of two detached dwellings with integral garages (plots 6 & 7) and associated access bridges	PER	20/11/2000	Neutral
	21	00/01171/FUL	47 West Garth Sherburn Malton North Yorkshire YO17 8PN	Erection of conservatory to east elevation	PER	02/11/2000	Neutral

22	01/00234/FUL	22 The Pastures Sherburn Malton North Yorkshire YO17 8PT	Erection of conservatory (retrospective application)	PER	12/04/2001	Moderate Beneficial
23	01/00238/FUL	3 Sycamore Grove Sherburn Malton YO17 8PX	Erection of conservatory (retrospective)	PER	12/04/2001	Moderate Beneficial
24	01/00258/FUL	Land Adjacent No.52 St Hilda's Street Sherburn Malton North Yorkshire	Erection of two detached dwellings with attached garages (Plots 9 and 10)	PER	18/05/2001	Neutral
25	01/00544/FUL	22 St Hilda's Street Sherburn Malton North Yorkshire YO17 8PG	Erection of porch to rear	PER	12/07/2001	Neutral
27	02/00226/FUL	33 St Hilda's Street Sherburn Malton North Yorkshire YO17 8PG	Erection of two storey extension to side	PER	18/04/2002	Neutral
28	02/00552/FUL	8 Sycamore Grove Sherburn Malton YO17 8PX	Erection of a dwelling (revised details to Plot 8 on approval 3/118/8K/FA dated 4.7.95)	PER	02/09/2002	Moderate Beneficial
29	02/00593/FUL	43 West Garth Sherburn Malton North Yorkshire YO17 8PN	Erection of extension to conservatory	PER	16/08/2002	Neutral
30	03/00142/FUL	6 St Hilda's Crescent Sherburn Malton North Yorkshire YO17 8PJ	Erection of extension to existing dormer window	PER	19/03/2003	Neutral
21	03/00090/MREM	Vicarage Farm Vicarage Lane Sherburn Malton North Yorkshire YO17 8PL	Erection of eleven dwellings	PER	15/01/2004	Slight Beneficial
31	04/00688/FUL	14 Elm Grove Sherburn Malton North Yorkshire YO17 8PF	Erection of conservatory to rear	PER	04/08/2004	Neutral

32	00/00051/FUL	Church Farm 8 Westgate Rillington Malton North Yorkshire YO17 8LN	Change of use of farm outbuildings to retail use for sale of ornamental grasses	PER	10/04/2000	Neutral
33	00/00182/FUL	Orchard Cottage Sledgate Rillington Malton North Yorkshire YO17 8JP	Erection of dwelling with detached double garage	PER	27/06/2000	Moderate Beneficial
33	00/00394/FUL	Land To South Of Post Office High Street Rillington Malton North Yorkshire YO17 8LA	Installation of domestic oil tank and garden shed to each of two new dwellings	PER	15/05/2000	Neutral
34	00/00784/73	73 Long Meadows Rillington Malton North Yorkshire YO17 8LY	Renewal of planning approval 3/106/106D/FA dated 13.07.95 for erection of a detached two bedroom bungalow and garage	PER	16/08/2000	Moderate Beneficial
33	00/01142/FUL	Greenbanks 5 Westgate Rillington Malton North Yorkshire YO17 8LN	Erection of conservatory to south and west elevations	PER	31/10/2000	Moderate Beneficial
34	00/01122/OUT	Land At Westgate Farm Westgate Rillington Malton North Yorkshire	Residential development (site area 0.39 ha)	PER	15/11/2000	Neutral
36	01/00292/FUL	7 Long Meadows Rillington Malton North Yorkshire YO17 8LY	Erection of front porch, conservatory to rear and detached garage/utility room	PER	17/04/2001	Neutral
34	01/00407/FUL	Orchard Cottage Sledgate Rillington Malton North Yorkshire YO17 8JP	Erection of conservatory	PER	01/06/2001	Neutral
37	01/00936/FUL	15 Pine Tree Avenue Rillington Malton North Yorkshire YO17 8LX	Erection of single-storey extension to rear	PER	18/10/2001	Neutral

	36	01/01041/FUL	63 Long Meadows Rillington Malton North Yorkshire YO17 8LY	Erection of single-storey extension to rear	PER	15/11/2001	Neutral
	34	02/00557/FUL	Orchard Cottage Sledgate Rillington Malton North Yorkshire YO17 8JP	Erection of garage/store and retention of pergola, satellite dish and trellis fencing to boundary walls	PER	30/07/2002	Neutral
	39	03/00368/FUL	8 Malton Road Rillington Malton North Yorkshire YO17 8LS	Erection of rear porch, detached garage, potting shed and greenhouse	PER	08/05/2003	Moderate Beneficial
	33	03/00494/CPO	Rillington Cp School High Street Rillington Malton North Yorkshire YO17 8LA	Erection of an entrance lobby extension.	SUPPOR	03/06/2003	Slight Beneficial
	37	03/00626/FUL	8 Pine Tree Avenue Rillington Malton North Yorkshire YO17 8LX	Erection of a single storey extension	PER	25/07/2003	Neutral
	40	00/01017/FUL	18 Malton Road Rillington Malton North Yorkshire YO17 8LS	Erection of car port	PER	25/10/2000	Neutral
	32	04/00390/FUL	6 Westgate Rillington Malton North Yorkshire YO17 8LN	Erection of single-storey extension to front with external wheelchair access ramp	PER	27/05/2004	Large Beneficial
	42	04/00742/AGNOT	Five Beeches Rillington Fields Malton Road Rillington Malton North Yorkshire YO17 8EB	Erection of lean-to extension to agricultural building for storage and housing of livestock	DET	25/06/2004	Neutral
	42	04/00588/FUL	Dale View Rillington Fields, Malton Road, Rillington YO17 8EB	Erection of single storey extension to form additional domestic accommodation and pitched roof to single storey flat roof extension.	PER	14/07/2004	Large Beneficial

	43	04/00848/AGNOT	Five Beeches Rillington Fields Malton Road Rillington Malton North Yorkshire YO17 8EB	Erection of lean-to extension to agricultural building for storage of hay, straw and agricultural machinery	DET	03/08/2004	Neutral
KNAPTON TO SHERBURN	45	01/00125/FUL	Manor Farm Church Lane East Heselton Malton North Yorkshire YO17 8RN	Erection of a single span agricultural building for grain storage	PER	10/04/2001	Neutral
	46	01/00361/REM	Sycamore House 35 High Street West Heselton Malton North Yorkshire YO17 8RD	Erection of a detached dwelling with attached garage	PER	22/08/2001	Large Beneficial
	47	01/00942/REM	Land South Of Scarborough Road West Heselton Malton North Yorkshire	Erection of 2 detached dwellings and garages (revised details to refusal 01/00744/REM dated 14.08.01)	PER	25/10/2001	Moderate Beneficial
	47	01/00553/FUL	Carr View, Carr Lane East Heselton, Malton YO17 8RP	Erection of a detached dwelling with attached garage and associated access.	PER	04/09/2001	Moderate Beneficial
	47	01/01168/FUL	Carr View, Carr Lane East Heselton, Malton YO17 8RP	Erection of dwelling with detached garage and associated access	PER	17/12/2001	Moderate Beneficial
	45	01/01265/FUL	Wold View Church Lane East Heselton Malton North Yorkshire YO17 8RN	Erection of two storey extension to side	PER	30/01/2002	Moderate Beneficial
	48	02/00148/FUL	4 Church Street West Heselton Malton North Yorkshire YO17 8RA	Erection of single-storey extension to rear	PER	11/04/2002	Moderate Beneficial
	49	02/00925/FUL	1 Eastgate Cottage Carr Lane East Heselton Malton North Yorkshire YO17 8RR	Erection of single-storey extension	PER	03/12/2002	Moderate Beneficial

	50	03/00352/FUL	The Old Vicarage Church Lane East Heslerton Malton North Yorkshire YO17 8RN	Erection of conservatory (retrospective) and detached double garage, revised details to refusal 02/01217/FUL dated 13.03.03 refers	PER	04/06/2003	Slight Adverse
	51	03/00421/73A	Heslerton Sports Field Sand Lane West Heslerton Malton North Yorkshire	Renewal of app 98/00020/FUL dated 05.05.98 for erection of sports pavilion and construction of 3 all-weather tennis courts/5-a-side/netball/basketball area complete with floodlight pylons and formation of new vehicle access and car parking	PER	12/06/2003	Moderate Adverse
	52	04/00621/FUL	Butcher House Farm Church Lane East Heslerton Malton North Yorkshire YO17 8RN	Change of use, alteration and extension of outbuildings and land to form three- bedroom dwelling with garage, domestic garden and parking area and erection of detached garden tool store and covered parking	PER	27/07/2004	Slight Adverse

SHERBURN TO SEAMIER	54	00/00713/LBC	28 Main Street Ganton Scarborough North Yorkshire YO12 4NR	Internal and external alterations and erection of single- storey extension	PER	25/07/2000	Slight Adverse
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	53	01/00215/FUL	Ganton Greyhound Hotel Main Road Ganton Scarboroug h North Yorkshire YO12 4NX	Change of use of ground floor shop/post office to hotel letting unit	PER	12/04/2001	Moderate Beneficia 1
	55	02/00498/FUL	The Old Barn Duck Lane Ganton Scarboroug h North Yorkshire YO12 4NU	Erection of first floor extension to garages to form additional domestic accommodation	PER	13/09/2002	Moderate Beneficia 1
	56	03/01151/FUL	1 Woodside Road Ganton Scarboroug h North Yorkshire YO12 4NS	Formation of a new access	PER	16/02/2004	Moderate Adverse
	57	03/01366/FUL	Ganton Golf Club Station Road Ganton Scarboroug h North Yorkshire YO12 4PB	Erection of golf driving range shelter	PER	05/02/2004	Moderate Beneficia 1

	58	04/00113/FUL	Ganton Hall Ganton Hill Ganton Scarborough North Yorkshire YO12 4NT	Alterations to balustraded wall to form opening for entrance steps	PER	08/04/2004	Neutral
	58	04/00114/LBC	Ganton Hall Ganton Hill Ganton Scarborough North Yorkshire YO12 4NT	External and internal alterations to include alterations to balustraded wall, formation of rear entrance and entrance hall with removal of fireplace and chimney breast and changes to internal layout	PER	08/04/2004	Neutral
	60	04/00377/FUL	17 Long Meadows Rillington Malton North Yorkshire YO17 8LY	Erection of conservatory to rear	PER	10/05/2004	Large Beneficial
	26	C3/99/01142/CPO	West Heslerton Quarry, off the A64	Extension on land west of existing sand quarry for extraction of sand.			Large Adverse

Table 3: The assessment of impacts on planning applications for the online route corridor of section 2.

Offline Route

SECTION	PLAN REF No	PLANNING APP NO.	SITE ADDRESS	PROPOSAL	DECISION	DATE OF DECISION	IMPACT
THE MARRS TO THE MALTINGS	35	01/00065/FUL	Sally Ducks Farm Low Moor Rillington Malton North Yorkshire YO17 8JU	Erection of first floor extension	PER	21/02/2001	Moderate Adverse
	61	03/00475/FUL	8 Station Cottages Low Moor Rillington Malton North Yorkshire YO17 8JX	Erection of single-storey extension to rear (revised details to refusal 03/00186/FUL dated 16.04.2003 refers)	PER	19/06/2003	Moderate Adverse
	61	03/00743/FUL	4 Station Cottages Station Road Sherburn Malton North Yorkshire YO17 8PS	Erection of conservatory	PER	02/10/2003	Slight Adverse
	38	02/00773/FUL	Nurscroft Low Moor Rillington Malton North Yorkshire YO17 8JU	Erection of two-storey and first floor extensions	PER	04/10/2002	Slight Adverse
	41	03/00346/AGNOT	Ivy Lea Farm Low Moor Rillington Malton North Yorkshire YO17 8JU	Erection of a general-purpose agricultural building	DET	22/04/2003	Neutral
MALTINGS TO SHERBURN	-	-	-	-	-	-	-
SHERBURN TO SEAMER	-	-	-	-	-	-	-

Table 4: The assessment of impacts on planning applications for the off-line route corridor for section 2.

11.14 Summary of Section 2

Section 2 from Malton Bypass (at Brambling Fields) to Seamer Bypass (at Seamer Carr)

Route Corridor	Large Adverse	Moderate Adverse	Slight Adverse	Neutral	Slight Beneficial	Moderate Beneficial	Large Beneficial	TOTAL
On-line	1 (1.4%)	2 (2.7%)	9 (12%)	40 (53.3%)	2 (2.6%)	16 (21.4%)	5 (6.6%)	75
Off-line	0 (0%)	2 (40%)	2 (40%)	1 (20%)	0 (0%)	0 (0%)	0 (0%)	5

Table 5: Summary of impacts of section 2. - Online Route Corridor

This route corridor results in 1 large adverse impact, 2 moderate adverse impact, 9 slight adverse impacts, 40 neutral impacts, 2 slight beneficial impacts, 16 moderate beneficial impacts and 5 large beneficial impacts. Over 50% of the impacts are balanced at neutral and over 20% are moderate beneficial.

The only direct impact of this scheme is in relation to the direct land take at West Heslerton Quarry, just off the existing A64 between Sherburn and Seamer. An application has been made to extend the land west of the existing quarry for the extraction of sand. It appears that the route corridor for this section has the potential to have an adverse impact on this proposal, which could affect the future operation of the quarry.

The remaining adverse impacts are all in relation to the indirect effects of the scheme. Where the scheme deviates offline around Rillington Village, West Heslerton and East Heslerton, future development around these areas is likely to encounter increased visual impact in comparison with an absence of a scheme. Conversely, future development within these areas is likely to encounter improvements in air quality, visual effects and traffic noise and vibration as a result of the removal of all non-local traffic.

Development land identified within the relevant local plans will not be affected by the scheme.

Offline Route Corridor

The offline route corridor affects a fewer number of planning applications than the online route corridor. This scheme has the potential to result in 2 moderate adverse impacts, 2 slight adverse impacts and 1 neutral impact.

The majority of the impacts of this scheme are adverse as the offline route corridor passes through an otherwise tranquil and rural area. In areas where the offline route corridor passes close to future development located away from the A64, they are likely to encounter indirect effects including a reduction in air quality, an increase in traffic noise and vibration, and an increase in visual impact. There are no direct impacts as a result of this scheme.

Development land identified within the relevant local plans will not be affected by the scheme.

11.14.1 Limitations and Assumptions of Section 2 from Malton Bypass (at Brambling Fields) to Seamer Bypass (at Seamer Carr)

The cut off date for the consideration of planning applications for this section in this assessment depended on when results of the search were received from the relevant planning authorities. In this case they were as follows:

- North Yorkshire County Council – 30th November 2004
- Ryedale District Council – August 2004.
- Scarborough Borough Council – 15th November 2004.

Any applications that were submitted after these dates have not been considered in this assessment. The decisions were not always stated in the information provided by the planning authorities, therefore for the purpose of this stage 1 assessment, they are all assumed approved. Outline planning applications have not been considered in this assessment. Impacts during the construction period have not been assessed.

11.14.2 Potential Further Mitigation of Section 2 from Malton Bypass (at Brambling Fields) to Seamer Bypass (at Seamer Carr)

Further mitigation at this stage could include the consideration of compensatory land for West Heslerton Quarry if the online route corridor was selected as the route to be progressed to stage 2.

11.15 Overall Summary

The York to Seamer section passes through a predominantly rural setting with scattered isolated properties adjacent to the existing A64. Therefore there are fewer planning applications for this section, which would be affected by an online widening scheme.

The majority of future development is located in the Ryedale District and within the villages of Rillington, Sherburn and smaller villages such as Scagglethorpe and West Knapton. The existing A64 passes through these villages, therefore the online route corridor has the potential to have a greater affect on future development in these areas. Future development located away from the existing A64 is unlikely to encounter any negative effects of this online widening scheme.

Only one direct impact was identified during this assessment for section 2 as a result of the online route corridor. An application has been made to extend to the west of West Heslerton Quarry for the extraction of sand. This route corridor is likely to have an adverse impact on this proposal, which could affect the future operation of the quarry.

The remaining adverse impacts for all route corridors are all in relation to the indirect effects of the scheme. Where the online route corridor for section 2 goes offline around Rillington Village, West Heslerton and East Heslerton, future development outside these areas is likely to encounter increased visual impact in comparison with an absence of a scheme. Conversely, future development within these areas is likely to encounter improvements in air quality, visual effects and traffic noise and vibration as a result of the removal of all non-local traffic.

The majority of the impacts associated with the offline route corridor for section 2 are adverse as it passes through an otherwise tranquil and rural area. In areas where the offline route corridor passes close to future development located away from the A64, they are likely

to encounter indirect effects including a reduction in air quality, an increase in traffic noise and vibration, and an increase in visual impact.

Land use development designations identified within the relevant local plans will not be affected by the section 1 route corridor and the online and offline route corridors for section 2.

In terms of section 2 and the effects on development land, it appears that there would be fewer proposals affected, fewer adverse impacts and more beneficial impacts if the offline route corridor was selected to be assessed as stage 2.

12 EFFECTS ON AGRICULTURAL LAND

12.1 Introduction

The objective of this stage 1 E.I.A report relating to the Effects on Agricultural Land is to undertake sufficient assessment to provide an appreciation of the likely consequences of land take for U K agriculture and to identify the agricultural land constraints associated with particular broadly defined routes, or corridors as developed by the Design Organisation and agreed with the overseeing Department's Project Manager.

This will involve establishing the quality of the agricultural land in the study area and if any areas are designated for their agricultural importance.

12.2 Assessment Techniques and Methodology

12.2.1 Guidelines

The following assessment has been based on guidelines provided in the Design Manual for Roads and Bridges, Volume II, Environmental Assessment, Section 3, Part 6, Chapters 6 to 10.

12.2.2 References

In carrying out the assessment reference has been made to the following documents and resources:

- Design Manual for Roads and Bridges.
- Planning Policy Statement 7: Sustainable Development in Rural Areas.
- Agricultural Land Classification (ALC) Map for the area.
- Information provided by DEFRA at Reading re ALC Maps
- Information provided by DEFRA at Northallerton re Countryside Stewardship and Environmentally Sensitive Area Schemes.

12.2.3 Methodology

Baseline Survey

For this Stage 1 Assessment, only a desk top study has been undertaken using information obtained from other appropriate bodies.

Definition of Scales of Impact

To assess the scale of the impact of the proposed routes on agricultural land quality Agricultural Land Classification Maps have been referred to.

To assist in assessing agricultural land quality, the Ministry of Agriculture Fisheries and Food (MAFF), now Department for Environment, Food & Rural Affairs (DEFRA) developed a method for classifying agricultural land by grade according to the degree to which its physical or chemical characteristics impose long-term limitations on agricultural land use. The Agricultural Land Classification Survey, although no longer to date, (surveying was undertaken between 1965 and 1974) is a useful, well established and understood planning tool and provides an appropriate framework for determining the quality of land at regional, and local levels.

The MAFF Agricultural Land Classification (ALC) system classifies land into five grades, numbered 1 to 5. The classification system was updated in 1988 and divides Grade 3 land into two categories of 3a good quality land and 3b moderate quality land. Revised guidelines and criteria for grading were published under the title ‘Agricultural Land Classification of England and Wales’ (MAFF1988).

Planning Policy Statement 7: Sustainable Development in Rural Areas (PPS7), published in 2004 states in relation to best and most versatile agricultural land that “The presence of best and most versatile agricultural land (defined as land in grades 1,2 and 3a of the Agricultural Land Classification), should be taken into account alongside other sustainability considerations (e.g. biodiversity; the quality and the character of the landscape; its amenity value or heritage interest; accessibility to infrastructure, workforce and markets; maintaining viable communities; and the protection of natural resources, including soil quality) when determining planning applications. Where significant development of agricultural land is unavoidable, local planning authorities should seek to use areas of poorer quality land (grades 3b, 4 and 5) in preference to that of a higher quality, except where this would be inconsistent with other sustainability considerations. Little weight in agricultural terms should be given to the loss of land in grades 3b, 4 and 5, except in areas (such as uplands) where particular agricultural practices may themselves contribute in some special way to the quality and character of the environment or the local economy. If any undeveloped agricultural land needs to be developed, any adverse effects on the environment should be minimised.

The best and most versatile land falls into grades 1, 2 and sub-grade 3a; which range from excellent to good quality. These grades of land are the most flexible, productive and efficient in response to inputs. It is thus best suited to adapting to the changing needs of agriculture, and they comprise approximately one-third of the total agricultural land in England and Wales.

Land in sub-grade 3b is of moderate quality with lower yields and/or more restricted cropping range. Grades 4 and 5 are poor and very poor land with severe or very severe limitations respectively.

Development of Possible Mitigation Measures

The mitigation proposals defined in this report are defined by the limitations of the study, (see below) and will be subject to modification and development.

Assessment of Impacts

The impacts in relation to the Effects on Agricultural Land were assessed in relation to the Definition of Scales of Impact.

In relation to Agricultural Land Quality the impacts were based on the grade and quality of land as set out in the ALC maps and the Agricultural Land Classification of England and Wales (MAFF 1988). Consultations with the appropriate authority have been undertaken for information on statutory or non-statutory areas designated for their agricultural importance.

Where an Environmentally Sensitive Area (ESA) could be affected by a route corridor, the key agricultural features of the ESA are described and it is considered how the route corridors could affect these features. Any agreed mitigation measures will be included.

Limitations to Surveys or Assessments

Assessments have been made looking at the broadly defined corridor. There is no information available regarding land take, cuttings and embankments, construction activities etc. Lengths of new carriageway have been scaled off the plans.

Without detailed proposals it is not possible to put forward detailed mitigation proposals however, the mitigation measures, which have been suggested are thought to be appropriate based on the information available.

Within the time frame it has not been possible to agree the mitigation proposals with the Highways Agency, therefore these measures are subject to modification and development.

This assessment has been limited to a desktop exercise and no site inspections have been made.

The assessment of Agricultural Land Quality has been limited to an analysis of the ALC maps with no on-site assessments being undertaken. DEFRA has not distinguished between grades 3a and 3b on the ALC maps although it is understood some isolated more detailed assessments have been made.

Assumptions in the Assessment

It is assumed that between the time of assessment and the start of construction similar agricultural activities and cropping practices on the land will continue.

Where there is a gradual change from grade 2 land through grade 3 to grade 4, it is reasonable to assume in broad terms that the transition will be from grade 2 through 3a to 3b and then to grade 4.

Due to changes in agricultural support from the EEC in 2005, it is assumed when Countryside Stewardship Schemes come to an end, farms will be included in the new Entry Level Scheme and Higher Level Scheme. These are Environment Stewardship Schemes managed by DEFRA as part of the new Single Payment Scheme introduced in 2005.

12.3 The Base Line Conditions of Section 1

The Base Line Conditions Section 1 from York Bypass (at A1237 Hopgrove junction) to Malton Bypass (at B1248 Musley Bank Junction)

The section from the York Bypass to Malton is primarily arable cropping with typical rotations including winter wheat, barley, oilseed, rape sugar beet and potatoes.

Sugar beet is grown for processing at the British Sugar Factory at York and potatoes at the McCains processing plant at Scarborough. Both crops involve transport along the A64.

There are no areas designated for their agricultural importance ie ESA's but many of the farm units affected have land entered in The Countryside Stewardship Scheme.

The Agricultural Land Classification areas are shown in Volume 2 Plan Series ? The land is predominately grade 3.

The Legislative Framework Section 1 from York Bypass (at A1237 Hopgrove junction) to Malton Bypass (at B1248 Musley Bank Junction)

The following documents have been taken into account:

- PPS7: Sustainable Development in Rural Areas.
- DMRB Volume II Section 3 Part 6.

12.4 Scheme Description of Section 1

12.4.1 Section 1 from York Bypass (at A1237 Hopgrove junction) to Malton Bypass (at B1248 Musley Bank Junction)

The proposed scheme is for various upgrade options for the A64 between York and Seamer. These are as follows:

- Completely dual the A64 from York to Seamer. (A64 Broad Based Study, Steer Davies Gleave, 2003, Option 4).
- Between York and Malton, the route is generally to follow the existing A64.
- Two lines east of Malton to be assessed:
- Generally following the line of the existing A64 – renamed by Capita Symonds as the On Line Route.
- Following the line of the old 1992 Public Consultation – renamed by Capita Symonds as the Off Line Route.

Assess a scheme which duals between York and Whitwell Bypass, improves the road to modern single carriageway standards between Whitwell and Malton Bypasses, duals between Malton and Rillington and improves the road to modern single carriageway east of Rillington (Steer Davies Gleave, Option 3).

At a stage One Environmental Impact Assessment the objective is to assess a broad corridor for advantages, disadvantages and constraints. Therefore this report is assessing the route as a broad corridor and not isolating specific requirements. All proposals affect agricultural land.

12.5 Identification of Impacts of Section 1

12.5.1 Section 1 from York Bypass (at A1237 Hoptrove junction) to Malton Bypass (at B1248 Musley Bank Junction)

Construction Impacts

Impacts as a result of construction will include general disruption and disturbance to farming activities in the vicinity of the works and crop loss due to land taken.

Operational Impacts

Several farm units as a result of land take, will lose grade 3 agricultural land, some of which may be grade 3a.

In addition, occupiers will find it more difficult to move farm machinery, harvested crops and livestock between severed areas of land.

12.6 Possible Mitigation Measures of Section 1

12.6.1 Section 1 from York Bypass (at A1237 Hoptrove junction) to Malton Bypass (at B1248 Musley Bank Junction)

For a Stage One Environmental Impact Assessment, mitigation proposals are not agreed with the Highways Agency. At this stage mitigation measures are to be regarded as suggestions, which can only be agreed upon once designs are developed.

Possible mitigation measures will include:

- Reinstatement of any disrupted field drainage.
- Reinstatement of stock proof field boundaries where livestock farming is practised.
- Reinstatement of disrupted farm/field water supplies.
- Provision of underpasses/over bridges to safely move farm machinery, crop and livestock across the proposals.
- Acquisition by the Acquiring Authority of small severed areas, which will be incapable of being farmed.

12.7 Impact Assessment of Section 1

There are no impacts relating to ESA's on this section.

Some Countryside Stewardship Schemes will be affected.

The following impact assessment, applies as an operational impact on the amount and quality of land affected. As the scheme involves utilizing the majority of the A64, as an online improvement, the requirement to use additional agricultural land will be minimised.

Route	Agricultural Land Classification	
Section 1 York Bypass to Malton Bypass	Grade 2	Grade 3
	0Km	23 Km

12.8 Summary of Section 1

12.8.1 Section 1 from York Bypass (at A1237 Hopgrove junction) to Malton Bypass (at B1248 Musley Bank Junction)

The proposals will not impact on any ESA's, but will affect farm units with Countryside Stewardship Schemes. The scheme will involve approximately 23 Kilometres of road through grade 3 agricultural land, but land take will be minimised by the alignment closely following the existing A64.

12.8.2 Limitations and Assumptions of Section 1 from York Bypass (at A1237 Hopgrove junction) to Malton Bypass (at B1248 Musley Bank Junction).

This assessment is limited by the amount of information that can be assembled by enquiries to DEFRA from ALC maps, and other appropriate bodies, and without inspecting the route.

12.8.3 Potential Further Mitigation of Section 1 from York Bypass (at A1237 Hopgrove junction) to Malton Bypass (at B1248 Musley Bank Junction).

As Stage 2 and Stage 3 of this EIA are completed in the future, further and more precise mitigation measures should be put forward and agreed with the scheme designers.

12.9 The Base Line Conditions of Section 2 On Line

12.9.1 The Base Line Conditions Section 2 On Line, from Malton Bypass (at Brambling Fields) to Seamer Bypass (at Seamer Carr)

The section from Malton to Seamer is primarily arable cropping with typical rotations including winter wheat, barley, oilseed, rape sugar beet and potatoes. There are free range pig units in the Scampston area and sheep grazing on the scarp slope to the Wolds.

Sugar beet is grown for processing at the British Sugar Factory at York and potatoes at the McCains processing plant at Scarborough. Both crops involve transport along the A64.

There are no areas designated for their agricultural importance ie ESA's but many of the farm units affected have land entered in Countryside Stewardship Scheme.

The Agricultural Land Classification areas are shown in Volume 2 Plan Series ? The land is predominately grade 3, with some grade 2 land immediately to the East of Malton. There are pockets of grade 4 land to the South of the A64 indicating the land towards Seamer, along the line of the A64 may be grade 3b.

12.9.2 The Legislative Framework Section 2 from Malton Bypass (at Brambling Fields) to Seamer Bypass (at Seamer Carr) On Line

The following documents have been taken into account:

- PPS7: Sustainable Development in Rural Areas.
- DMRB Volume II Section 3 Part 6.

12.10 Scheme Description of Section 2 On Line

12.10.1 Section 2 On Line from Malton Bypass (at Brambling Fields) to Seamer Bypass (at Seamer Carr)

The proposed scheme is for various upgrade options for the A64 between York and Seamer. These are as follows:

- Completely dual the A64 from York to Seamer. (A64 Broad Based Study, Steer Davies Gleave, 2003, Option 4).
- Between York and Malton, the route is generally to follow the existing A64.
- Two lines east of Malton to be assessed:
- Generally following the line of the existing A64 – renamed by Capita Symonds as the On Line Route
- Following the line of the old 1992 Public Consultation – renamed by Capita Symonds as the Off Line Route

Assess a scheme which duals between York and Whitwell Bypass, improves the road to modern single carriageway standards between Whitwell and Malton Bypasses, duals between Malton and Rillington and improves the road to modern single carriageway east of Rillington (Steer Davies Gleave, Option 3).

At a stage One Environmental Impact Assessment the objective is to assess a broad corridor for advantages, disadvantages and constraints. Therefore this report is assessing the route as a

broad corridor and not isolating specific requirements. All proposals have an impact on agricultural land.

12.11 Identification of Impacts of Section 2 On Line

12.11.1 Section 2 from Malton Bypass (at Brambling Fields) to Seamer Bypass (at Seamer Carr) On Line

Construction Impacts

Impacts as a result of construction will include general disruption and disturbance to farming activities in the vicinity of the works and crop loss due to land taken.

Operational Impacts

Several farm units as a result of land take, will lose grade 3 agricultural land. This will be a mixture of grade 3a and 3b land with a small amount of grade 2 East of Malton.

In addition, occupiers will find it more difficult to move farm machinery, harvested crops and livestock between severed areas of land.

12.12 Possible Mitigation Measures of Section 2 On Line

12.12.1 Section 2 from Malton Bypass (at Brambling Fields) to Seamer Bypass (at Seamer Carr) On Line

For a Stage One Environmental Impact Assessment, mitigation proposals are not agreed with the Highways Agency. At this stage mitigation measures are to be regarded as suggestions, which can only be agreed upon once designs are developed.

Possible mitigation measures will include:

- Reinstatement of any disrupted field drainage.
- Reinstatement of stock proof field boundaries where livestock farming is practised.
- Reinstatement of disrupted farm/field water supplies.
- Provision of underpasses/over bridges to safely move farm machinery, crop and livestock across the proposals.
- Acquisition by the Acquiring Authority of small severed areas, which will be incapable of being farmed.

12.13 Impact Assessment of Section 2 On Line

There are no impacts relating to ESA's on this section.

Some Countryside Stewardship Schemes will be affected.

The following impact assessment, applies as an operational impact on the amount and quality of land affected.

Route	Agricultural Land Classification

Section 2 Malton Bypass to Seamer Bypass (On line)	Grade 2 6 Km	Grade 3 17 Km

12.14 Summary of Section 2 On Line

12.14.1 Section 2 from Malton Bypass (at Brambling Fields) to Seamer Bypass (at Seamer Carr) On Line

The proposals will not impact on any ESA's, but will affect farms with Countryside Stewardship Schemes. The scheme will involve approximately 6 Km of road through grade 2 land and 17 Km through grade 3 land.

12.14.2 Limitations and Assumptions of Section 2 from Malton Bypass (at Brambling Fields) to Seamer Bypass (at Seamer Carr) On Line

This assessment is limited by the amount of information that can be assembled by enquiries to DEFRA, from ALC maps, and other appropriate bodies, and without inspecting the route.

12.14.3 Potential Further Mitigation of Section 2 from Malton Bypass (at Brambling Fields) to Seamer Bypass (at Seamer Carr) On Line

As Stage 2 and Stage 3 of this EIA are completed in the future, further and more precise mitigation measures should be put forward and agreed with the scheme designers.

12.15 The Base Line Conditions of Section 2 Off Line

12.15.1 The Base Line Conditions Section 2 Off Line, from Malton Bypass (at Brambling Fields) to Seamer Bypass (at Seamer Carr)

The section from Malton to Seamer is primarily arable cropping with typical rotations including winter wheat, barley, oilseed, rape sugar beet and potatoes. There are free range pig units in the Scampton area and sheep grazing on the scarp slopes to the Wolds.

Sugar beet is grown for processing at the British Sugar Factory at York and potatoes at the McCains processing plant at Scarborough. Both crops involve transport along the A64.

There are no areas designated for their agricultural importance ie ESA's but many of the farm units affected have land entered in Countryside Stewardship Scheme.

The Agricultural Land Classification areas are shown in Volume 2 Plan Series ? The land is predominately grade 3, with some grade 2 land immediately to the East of Malton. Between Malton and Sherburn, the land north of the Railway is predominately grade 2, indicating the land affected by the scheme in this area may be grade 3a.

12.15.2 The Legislative Framework Section 2 from Malton Bypass (at Brambling Fields) to Seamer Bypass (at Seamer Carr) Off Line

The following documents have been taken into account:

- PPS7: Sustainable Development in Rural Areas.
- DMRB Volume II Section 3 Part 6.

12.16 Scheme Description of Section 2 Off Line

12.16.1 Section 2 Off Line from Malton Bypass (at Brambling Fields) to Seamer Bypass (at Seamer Carr)

The proposed scheme is for various upgrade options for the A64 between York and Seamer. These are as follows:

- Completely dual the A64 from York to Seamer. (A64 Broad Based Study, Steer Davies Gleave, 2003, Option 4).
- Between York and Malton, the route is generally to follow the existing A64.
- Two lines east of Malton to be assessed:
- Generally following the line of the existing A64 – renamed by Capita Symonds as the On Line Route
- Following the line of the old 1992 Public Consultation – renamed by Capita Symonds as the Off Line Route

Assess a scheme which duals between York and Whitwell Bypass, improves the road to modern single carriageway standards between Whitwell and Malton Bypasses, duals between Malton and Rillington and improves the road to modern single carriageway east of Rillington (Steer Davies Gleave, Option 3).

At a stage One Environmental Impact Assessment the objective is to assess a broad corridor for advantages, disadvantages and constraints. Therefore this report is assessing the route as a

broad corridor and not isolating specific requirements. All proposals impact on agricultural land.

12.17 Identification of Impacts of Section 2 Off Line

12.17.1 Section 2 from Malton Bypass (at Brambling Fields) to Seamer Bypass (at Seamer Carr) Off Line

Construction Impacts

Impacts as a result of construction will include general disruption and disturbance to farming activities in the vicinity of the works and crop loss due to land taken.

Operational Impacts

Several farm units, as a result of land take, will lose grade 3 agricultural land, some of which may be grade 3a. Some units between Malton and Scampton may lose grade 2 land.

In addition, occupiers will find it more difficult to move farm machinery, harvested crops and livestock between severed areas of land.

12.17.2 Possible Mitigation Measures of Section 2 Off Line

Section 2 from Malton Bypass (at Brambling Fields) to Seamer Bypass (at Seamer Carr) Off Line

For a Stage One Environmental Impact Assessment, mitigation proposals are not agreed with the Highways Agency. At this stage mitigation measures are to be regarded as suggestions, which can only be agreed upon once designs are developed.

Possible mitigation measures will include:

- Reinstatement of any disrupted field drainage.
- Reinstatement of stock proof field boundaries where livestock farming is practised.
- Reinstatement of disrupted farm/field water supplies.
- Provision of underpasses/over bridges to safely move farm machinery, crop and livestock across the proposals.
- Acquisition by the Acquiring Authority of small severed areas, which will be incapable of being farmed.

12.18 Impact Assessment of Section 2 Off Line

12.18.1 Section 2 from Malton Bypass (at Brambling Fields) to Seamer Bypass (at Seamer Carr) Off Line

There are no impacts relating to ESA's on this section.

Some Countryside Stewardship Schemes will be affected.

The following impact assessment, applies as an operational impact on the amount and quality of land affected.

Route	Agricultural Land Classification	
Section 2 Malton Bypass to Seamer Bypass	Grade 2	Grade 3
(Off line)	7 Km	17 Km

12.19 Summary of Section 2 Off Line

Section 2 from Malton Bypass (at Brambling Fields) to Seamer Bypass (at Seamer Carr) Off Line

The proposals will not impact on any ESA's but will affect farms with Countryside Stewardship Schemes. The Scheme will involve approximately 7 Km of road through grade 2 land and 17 Km through grade 3 land.

12.19.1 Limitations and Assumptions of Section 2 from Malton Bypass (at Brambling Fields) to Seamer Bypass (at Seamer Carr) Off Line

This assessment is limited by the amount of information that can be assembled by enquiries to DEFRA, from ALC maps, and other appropriate bodies, and without inspecting the route.

12.19.2 Potential Further Mitigation of Section 2 from Malton Bypass (at Brambling Fields) to Seamer Bypass (at Seamer Carr) Off Line

As Stage 2 and Stage 3 of this EIA are completed in the future, further and more precise mitigation measures should be put forward and agreed with the scheme designers.

12.20 Overall Summary

In relation to both sections and all options none of the proposals impact on ESA's but will affect farm units with Countryside Stewardship Schemes.

Section 1 involves constructing approximately 23 Kilometres of road through grade 3 agricultural land, but land take will be minimised as it is on line.

In relation to Section 2 the on line proposal will involve constructing approximately 6 Km of road through grade 2 agricultural land and 17 Km through grade 3 agricultural land.

The off line proposal will involve constructing approximately 7 Km of road through grade 2 agricultural land and 17 km through grade 3 agricultural land.

13 TRAFFIC NOISE AND VIBRATION

13.1 Introduction

Traffic on a road causes noise and vibration that can affect those who live nearby or those who use noise sensitive buildings/areas such as schools, recreation areas etc.

This section assesses the impact of the schemes through traffic noise and vibration.

13.2 Assessment Techniques and Methodology

13.2.1 Guidelines

The guidance adopted is taken from the Design Manual for Roads and Bridges Volume 11 Section 3:Part 1 Traffic Noise and Vibration, Department of Transport 1994.

Additional guidance has been adopted from the Transport Analysis Guidance Website (www.webtag.org.uk).

13.2.2 References

Reference has been made to previously published surveys, maps and reports, etc., including:

- Ordnance Survey 1:2500 scale digital mapping.

13.2.3 Methodology

Baseline Survey

Base line survey information was primarily obtained by desk study calculation in accordance with the DMRB methodology.

Definition of Scales of Impact

There is no textual scale for the comparison of scales of impact traffic noise and vibration. A quantitative comparison has been undertaken.

The quantitative comparison is based on estimation of the number of properties within 0 to 100m, 100m to 200m, and 200m to 300m bands of the existing routes and route corridors.

Development of Possible Mitigation Measures

The impact at a particular site was assessed from the distance of the site to the centre of the existing route network or route corridors, as well as the site's estimated sensitivity to traffic noise and vibration. Options for possible mitigation measures should include, realigning the route further away from the location and providing environmental barriers (earth mounding/acoustic fencing).

Assessment of Impacts

Quantitative methods were used to assess impacts including:

- Property Banding, the counting of properties within 40m and 100m distance bands of the route corridors and existing route network.

Limitations to Surveys or Assessments

There are none.

Assumptions in the Assessment

It was assumed that the scheme opening year will be 2014.

Any potential reduction in noise due to planted areas, hedgerows trees etc. has been ignored.

13.3 The Base Line Conditions of Section 1

13.3.1 The Base Line Conditions Section 1 from York Bypass (at A1237 Hopgrove junction) to Malton Bypass (at B1248 Musley Bank Junction)

Within the scope of the study area, the A64 can be identified as the main traffic route that is responsible for the majority of the existing traffic noise and vibration. Out with the A64 are country roads that will also generate traffic noise and vibration but to a much lesser extent.

The small villages of Crambeck and Whitwell-on-the-Hill are located within close proximity of the A64 as well as numerous farmhouses and residential properties that can be located along this length of the A64.

Recreational areas that might be particularly sensitive to traffic noise and vibration can be identified as a racecourse to the south of Whitwell-on-the-Hill and a tennis court in Crambeck. These noise sensitive locations identified are all within 300m from the existing route network.

Property Banding

A count of the properties within 100m distance bands from the existing routes is summarised in table 1 below.

Distance Band from A64	Number of Properties
0-100m	87
100-200m	77
200-300m	57
Total	221

Table 1 – A64 York Bypass to Malton Bypass “Do Minimum” Property Bandings

13.4 The Legislative Framework Section 1 from York Bypass (at A1237 Hopgrove junction) to Malton Bypass (at B1248 Musley Bank Junction)

The assessment of traffic noise and vibration is not specifically covered by any legislation. However, the Noise Insulation Regulations 1975 (and amended 1988) do provide levels of traffic generated noise for which a property would be eligible for compensatory noise insulation.

13.5 Scheme Description of Section 1

13.5.1 Section 1 from York Bypass (at A1237 Hopgrove junction) to Malton Bypass (at B1248 Musley Bank Junction)

The majority of the route corridor for section 1 is online with the existing A64. The locations where the route corridor goes slightly offline are from:

- Hazelbush Cottage to Sand Hutton road junction.
- West of Hutton Hill to Barnygate Lane junction.
- Sawkill Farm access junction to Roughborough Farm access junction.

The route corridor for section 1 still comes within close proximity to the villages of Crambeck and Whitwell-on-the-Hill. The noise sensitive recreational areas described in the base line conditions are still within 300m from the centre of the route corridor.

Property Banding

A count of the properties within 100m distance bands from the centre of the route corridor is summarised in table 2 below.

Distance Band from Centre of Route Corridor	Number of Properties
0-100m	82
100-200m	81
200-300m	58
Total	221

Table 2 – Section 1 Route Corridor Property Bandings

13.6 Identification of Impacts of Section 1

13.6.1 Section 1 from York Bypass (at A1237 Hopgrove junction) to Malton Bypass (at B1248 Musley Bank Junction)

Construction Impacts

Construction activities will result in a temporary increase in noise and vibration levels at several properties. The severity of the impact will vary depending on the activities in progress, the noisiest typically being site clearance and bulk earthworks.

Operational Impacts

Out of the total number of properties identified within the 300m property banding, there is approximately 37% that are located within 100m from the centre of the route corridor. These properties will experience the greatest disruption due to traffic noise and vibration which could reduce the quality of life for the residents of these properties.

Almost 50% of the total number of properties identified within the 300m property banding can be located within the villages of Crambeck and Whitwell-on-the-Hill. The properties within these villages that are closest to the centre of the route corridor will experience the greatest disruption, but in doing so will also form a barrier for any property behind it. Having this “house barrier” in front of the property will reduce the level of traffic noise and vibration.

No detailed assessment of vibration levels has been undertaken at this stage. However, there are 25 properties within 40m from the centre of the route corridor resulting in these properties having a greater chance of being affected by vibration.

13.7 Possible Mitigation Measures of Section 1

13.7.1 Section 1 from York Bypass (at A1237 Hopgrove junction) to Malton Bypass (at B1248 Musley Bank Junction)

Construction Impacts

To control the potential noise and vibration nuisance the contract should include restrictions on working hours, and allowable noise and vibration levels. These restrictions will be agreed with the local authority and monitored throughout the construction period. Sensitive choice of equipment, construction methods, timing and use of acoustic screens where required will help to keep disturbance from construction operations to a minimum.

Residents should receive advance notice of timing and duration of works, and will be provided with a point of contact for queries and complaints,

Construction related vehicles travelling to and from site will be restricted to using certain roads in the surrounding road network, to minimise any effects on outlying populated areas.

Operational Impacts

“Quiet” road surfacing should be used throughout the scheme.

The alignment of the route should be redirected further away from the villages of Crambeck and Whitwell-on-the-Hill. If this is not a feasible option then the route should be designed so that it is in cutting at these areas. If this is still not feasible then environmental barriers should be installed along the verge of the route.

The route should be designed so that it is in cutting at the Holmes Crescent area. If this is not a feasible option then environmental barriers should be installed.

For individual properties throughout the length of the route corridor where the design of the road is not in cutting, environmental barrier should be installed.

13.8 Impact Assessment of Section 1

13.8.1 Section 1 from York Bypass (at A1237 Hopgrove junction) to Malton Bypass (at B1248 Musley Bank Junction)

Construction Impacts

Construction activities will result in a temporary increase in noise and vibration levels at several properties during normal working hours.

Operational Impacts

The majority of the route corridor is mainly online with the existing A64, resulting in there being no change in the number of properties within 300m from the route corridors centreline, compared to the number of properties within 300m from the existing route. The sections where the route corridor does go offline results a reduction in the number of properties within 100m. When compared with the existing route this number drops from 87 to 82.

With regards to vibration the route corridor also has a reduction in the number of properties within 40m from the centre line. The existing route currently has 30 properties within 40m, which is an increase of 5 properties when compared to section 1.

13.9 Summary of Section 1

13.9.1 Section 1 from York Bypass (at A1237 Hopgrove junction) to Malton Bypass (at B1248 Musley Bank Junction)

Due to there being no change in the number of housing within 300m of section 1's route corridor compared to the existing route, the impact of the scheme with regards to traffic noise and vibration will be minimal and therefore will result in a neutral affect.

13.9.2 Limitations and Assumptions of Section 1 from York Bypass (at A1237 Hopgrove junction) to Malton Bypass (at B1248 Musley Bank Junction)

None.

13.9.3 Potential Further Mitigation of Section 1 from York Bypass (at A1237 Hopgrove junction) to Malton Bypass (at B1248 Musley Bank Junction)

None.

13.10 The Base Line Conditions of Section 2

13.10.1 The Base Line Conditions Section 2 from Malton Bypass (at Brambling Fields) to Seamer Bypass (at Seamer Carr)

Within the scope of the study area, the A64 can be identified as the main traffic route that is responsible for the majority of the existing traffic noise and vibration. Out with the A64 are country roads that will also generate traffic noise and vibration but to a much lesser extent.

There are numerous villages that are located within close proximity of the existing A64. Of which the villages of Scagglethorpe, Rillington, West Heslerton, Sherburn and Staxton are responsible for approximately 80% of the total number of properties within 300m from the existing route.

The village of Rillington suffers the largest impact from traffic noise and vibration with approximately 430 properties within 300m of the existing route. This is due to the A64 currently passing straight through the middle of the village.

There are three schools that are located within the villages of Rillington, Sherburn and Staxton that should be considered as sensitive to traffic noise and vibration. These schools are all within 300m from the existing route. Within these villages there are also playing fields that are also within 300m and could be identified as noise sensitive recreational areas as well as parts of Glanton golf course.

Property Banding

A count of the properties within 100m distance bands from the existing routes is summarised in table 3 below.

Distance Band from A64	Number of Properties
0-100m	439
100-200m	449
200-300m	264
Total	1152

Table 3 – A64 Malton Bypass to Seamer Bypass “Do Minimum” Property Bandings

13.11 The Legislative Framework Section 2 from Malton Bypass (at Brambling Fields) to Seamer Bypass (at Seamer Carr)

The assessment of traffic noise and vibration is not specifically covered by any legislation. However, the Noise Insulation Regulations 1975 (and amended 1988) do provide levels of traffic generated noise for which a property would be eligible for compensatory noise insulation.

13.12 Scheme Description of Section 2 (Online)

13.12.1 Section 2 (Online) from Malton Bypass (at Brambling Fields) to Seamer Bypass (at Seamer Carr)

The route corridor starts online with the existing A64 but quickly goes offline so that the route corridor is diverted to the south of Rillington. The route corridor continues offline in a

north easterly direction winding around the outskirts of West Heslerton and East Heslerton before becoming online for a short distance at Grange Cottage. The route corridor then realigns to the south of Sherburn and Glanton and then goes into a long north eastern straight that connects to Seamer Bypass.

There are two playing fields within Scagglethorpe and Rillington as well as areas of Glanton golf course that are located within 300m from the centre of the route corridor that could be considered as noise sensitive recreational areas.

Property Banding

A count of the properties within 100m distance bands of the centre of the route corridor is summarised in table 4 below.

Distance Band from Centre of Route Corridor	Number of Properties
0-100m	98
100-200m	170
200-300m	158
Total	426

Table 4 – Section 2 (Online) Route Corridor Property Bandings

13.13 Identification of Impacts of Section 2 (Online)

13.13.1 Section 2 (Online) from Malton Bypass (at Brambling Fields) to Seamer Bypass (at Seamer Carr)

Construction Impacts

Construction activities will result in a temporary increase in noise and vibration levels at several properties. The severity of the impact will vary depending on the activities in progress, the noisiest typically being site clearance and bulk earthworks.

Operational Impacts

Out of the total number of properties identified within the 300m property banding, there is approximately 23% that are located within 100m from the centre of the route corridor. These properties will experience the greatest disruption due to traffic noise and vibration that could reduce the quality of life for the residents of these properties.

Almost 55% of the total number of properties identified within the 300m property banding can be located within the villages of Scagglethorpe, East Heslerton and Sherburn. The properties within these villages that are closest to the centre of the route corridor will experience the greatest disruption, but in doing so will also form a barrier for any property behind it. Having this “house barrier” in front of the property will reduce the level of traffic noise and vibration.

No detailed assessment of vibration levels has been undertaken at this stage. However, there are 16 properties within 40m of the centre of the route corridor resulting in these properties having a greater chance of being affected by vibration.

13.14 Possible Mitigation Measures of Section 2 (Online)

13.14.1 Section 2 (Online) from Malton Bypass (at Brambling Fields) to Seamer Bypass (at Seamer Carr)

Construction Impacts

To control the potential noise and vibration nuisance the contract should include restrictions on working hours, and allowable noise and vibration levels. These restrictions will be agreed with the local authority and monitored throughout the construction period. Sensitive choice of equipment, construction methods, timing and use of acoustic screens where required will help to keep disturbance from construction operations to a minimum.

Residents should receive advance notice of timing and duration of works, and will be provided with a point of contact for queries and complaints,

Construction related vehicles travelling to and from site will be restricted to using certain roads in the surrounding road network, to minimise any effects on outlying populated areas.

Operational Impacts

“Quiet” road surfacing should be used throughout the scheme.

As 55% of the total numbers of properties within 300m from the route corridor centre are located within the villages of Scagglethorpe, East Heslerton and Sherburn, redirecting the route corridor further away from these villages will reduce the total number of properties affected. If this is not a feasible option then the route should be designed so that it is in cutting at these areas. If this is still not feasible then environmental barriers should be installed along the verge of the route.

The route should be designed so that it is in cutting at the Glanton area and south of Rillington. If this is not a feasible option then environmental barriers should be installed.

For individual properties throughout the length of the route corridor where the design of the road is not in cutting, environmental barrier should be installed.

13.15 Impact Assessment of Section 2 (Online)

13.15.1 Section 2 (Online) from Malton Bypass (at Brambling Fields) to Seamer Bypass (at Seamer Carr)

Construction Impacts

Construction activities will result in a temporary increase in noise and vibration levels at several properties during normal working hours.

Operational Impacts

The total number of properties within 300m from the route corridor centre shows a vast decrease when compared to the total number of properties resultant from the do minimum option. By redirecting the route further away from the main villages decreases the number of properties affected by 726.

However, some properties will experience a large increase in the level of traffic noise and vibration due the proposed road realigning closer to a property than the current distance from the property to the existing A64. These properties will require sufficient protection from traffic noise and vibration so that the change in level is a lot less noticeable.

With regards to vibration the route corridor also has a reduction in the number of properties within 40m of the centre line. The existing route currently has 231 properties within 40m, which is a vast increase of 215 properties when compared to the do something option.

13.16 Summary of Section 2 (Online)

13.16.1 Section 2 (Online) from Malton Bypass (at Brambling Fields) to Seamer Bypass (at Seamer Carr)

Section 2 (Online) shows a decrease of 726 properties within 300m from the route corridor centre when compared to the do minimum option. This large decrease will result in the scheme having a positive affect with the surrounding area regarding traffic noise and vibration.

13.16.2 Limitations and Assumptions of Section 2 from Malton Bypass (at Brambling Fields) to Seamer Bypass (at Seamer Carr)

None.

13.16.3 Potential Further Mitigation of Section 2 from Malton Bypass (at Brambling Fields) to Seamer Bypass (at Seamer Carr)

13.17 Scheme Description of Section 2 Off line Route

13.17.1 Section 2 Off line Route from Malton Bypass (at Brambling Fields) to Seamer Bypass (at Seamer Carr)

From Malton bypass the Route corridor is redirected northwards before changing into a northeastern direction to the east of Scagglethorpe Grange. At this point the route corridor roughly follows the same alignment as the existing railway line all the way to Seamer bypass. The route corridor occasionally weaves southwards in order to distance itself from properties around the areas of Poplars Lane and Station Cottages.

There are some areas to the northern limits of Glanton golf course that come within 300m from the route corridor centre that could be considered as a noise sensitive recreation location.

Property Banding

A count of the properties within 100m distance bands of the centre of the route corridor is summarised in table 5 below.

Distance Band from Centre of Route Corridor	Number of Properties
0-100m	14
100-200m	46
200-300m	21
Total	81

Table 5 – Section 2 Off line Route Route Corridor Property Bandings

13.18 Identification of Impacts of Section 2 Off line Route

13.18.1 Section 2 Off line Route from Malton Bypass (at Brambling Fields) to Seamer Bypass (at Seamer Carr)

Construction Impacts

Construction activities will result in a temporary increase in noise and vibration levels at several properties. The severity of the impact will vary depending on the activities in progress, the noisiest typically being site clearance and bulk earthworks.

Operational Impacts

Out of the total number of properties identified within the 300m property banding, there is approximately 17% that are located within 100m from the centre of the route corridor. These properties will experience the greatest disruption due to traffic noise and vibration that could reduce the quality of life for the residents of these properties.

As there are no villages within close proximity to the route corridor most of the properties that make up the total number are individual isolated properties. The largest collection of properties is around the Poplars Lane area with 14 properties.

No detailed assessment of vibration levels has been undertaken at this stage. However, there are no properties within 40m of the centre of the route corridor.

13.19 Possible Mitigation Measures of Section 2 Off line Route

13.19.1 Section 2 (Preferred from Malton Bypass (at Brambling Fields) to Seamer Bypass (at Seamer Carr))

Construction Impacts

To control the potential noise and vibration nuisance the contract should include restrictions on working hours, and allowable noise and vibration levels. These restrictions will be agreed with the local authority and monitored throughout the construction period. Sensitive choice of equipment, construction methods, timing and use of acoustic screens where required will help to keep disturbance from construction operations to a minimum.

Residents should receive advance notice of timing and duration of works, and will be provided with a point of contact for queries and complaints,

Construction related vehicles travelling to and from site will be restricted to using certain roads in the surrounding road network, to minimise any effects on outlying populated areas.

Operational Impacts

“Quiet” road surfacing should be used throughout the scheme.

Redirecting the route corridor further away from Poplars Lane and Station Cottages areas will reduce the total number of properties affected. If this is not a feasible option then the route should be designed so that it is in cutting at these areas. If this is still not feasible then environmental barriers should be installed along the verge of the route.

For individual properties throughout the length of the route corridor where the design of the road is not in cutting, environmental barrier should be installed.

13.20 Impact Assessment of Section 2 Off line Route

13.21 Section 2 Off line Route from Malton Bypass (at Brambling Fields) to Seamer Bypass (at Seamer Carr)

Construction Impacts

Construction activities will result in a temporary increase in noise and vibration levels at several properties during normal working hours.

Operational Impacts

The total number of properties within 300m from the route corridor centre shows a vast decrease when compared to the total number of properties resultant from the do minimum option. By redirecting the route further away from the existing alignment decreases the number of properties affected by 1071.

However, most of the properties within 300m of the route corridor centre will experience a large increase in the level of traffic noise and vibration due the proposed road realigning closer to a property than the current distance from the property to the existing A64. Some of these properties will also have the added effect of noise and vibration coming from the railway line on top of traffic noise and vibration from the proposed road. All of the

properties within 300m of the route corridor centre will require sufficient protection from traffic noise and vibration so that the change in level is a lot less noticeable.

With regards to vibration the route corridor also has 0 properties within 40m of the centre line. This is a very large decrease when compared to the 231 properties within 40m for the do minimum option.

13.22 Summary of Section 2 Off line Route

13.22.1 Section 2 Off line Route from Malton Bypass (at Brambling Fields) to Seamer Bypass (at Seamer Carr)

Section 2 Off line Route shows a decrease of 1071 properties within 300m from the route corridor centre when compared to the do minimum option. This very large decrease will result in the scheme having a positive affect with the surrounding area regarding the impact of traffic noise and vibration.

13.22.2 Limitations and Assumptions of Section 2 Off line Route from Malton Bypass (at Brambling Fields) to Seamer Bypass (at Seamer Carr)

None.

19.3 Potential Further Mitigation of Section 2 Off line Route from Malton Bypass (at Brambling Fields) to Seamer Bypass (at Seamer Carr)

13.23 Overall Summary

Comparing section 1's route corridor to the do minimum option shows a neutral impact due to the majority of section 1's route corridor being online with the existing A64.

Both the online and preferred route corridors for section 2 show a positive impact when compared to the do minimum option due to the large decrease in the number of properties within the 300m property bandings.

14 PEDESTRIAN, CYCLISTS, EQUESTRIANS AND COMMUNITY EFFECTS

14.1 Introduction

The purpose of the assessment is to describe the impact of the proposed route on journeys made by pedestrians, cyclists, equestrians and others in the locality of the scheme. Where applicable it also assesses the impacts on the routes used by vehicle travellers where the proposed route effects current usage arrangements.

14.2 Assessment Techniques and Methodology

14.2.1 Guidelines

The methodology adopted is taken from DMRB volume 11 section 3: part 8 pedestrians, cyclists, equestrians and community effects.

14.2.2 References

Reference has been made to previously published surveys, maps and reports, including:

- Bullen & Partners Consulting Engineers report November 1992 Report No. SB/90D203/015/A
- Steer Davies Gleave, A64 BA64 Based Study, Economic Impact Report August 2003
- RPS Clanston Landscape Report Volume 1 1993

14.2.3 Methodology

Baseline Survey

Baseline survey information was obtained from previously published reports and using base plans proposed by Capita Symonds Ltd for the proposed scheme to date.

Definition of scales of impact

DMRB Volume 11 Section 3 Part 8 Pedestrians and Others does not prescribe scales of impact for the effects of this route. However, it recommends that the objective is to undertake sufficient assessment to provide an appreciation of the likely effects on pedestrians, cyclists and equestrians and for people's ability to move around their local community.

Development of Possible Mitigation Measures

The main impacts in relation to pedestrians, cyclists, equestrians and community effects were identified.

Appropriate and feasible mitigation measures were proposed.

Assessment of Impacts

At this stage, the alignment of the route has progressed to a point where general assessments can be made on changes in the safety and amenity value of routes used by pedestrians and others.

14.2.4 Limitations to Surveys or Assessments

Surveys for pedestrian, cyclist and equestrian counts have not been undertaken for this assessment. However, reference is made to a survey carried out on behalf of Bullen & Partners in 1991 and published in the Bullen's report in 1992.

14.2.5 Assumptions in the Assessment

The present condition of the footpaths is not known. However, when a footpath survey was carried out by Bullen and Partners in 1991, it was noted that several of the footpaths were overgrown or not visible on the ground. For the purpose of this assessment it was assumed that all the footpaths were passable on foot.

14.3 The Base Line Conditions of Section 1

The southern part of the study route runs from Hopgrove roundabout to Barton View. The route begins as dual carriageway for 550m before reverting to a single carriageway, subject to the national speed limit. The first junction heading north east is a grade 'T' type at Stockton Hall Lodge serving north lane and a small village consisting of a mixture of farm buildings and residential properties. There is a public footpath (footpath 2 on the plan) which runs for a length of 1000m between the village of Stockton-on-the Forest, crosses Forest Park golf course and meets the A64 at the Lodge (opposite north lane). There is a hospital located along the route of the footpath as it leaves Stockton heading west to join the A64. In view of this the route would carry certain level of importance to local population.

Approximately 2 1/2 km further on heading north east at Hazelbush Hill is an at grade junction with Towthorpe Moor Lane serving several farm buildings and residential properties including two public houses. 1 1/2 km further north east is another 'T' junction at Sanburn Wood.

At Flaxton and Claxton there is two at grade junctions which lie approximately 12 km north east of York and lie just 450m apart. The A64 at this point is single carriageway and relatively flat in the vicinity of the junctions. A minor unclassified road from Flaxton joins the east bound carriageway from the north and another minor A64 (C93) joins the westbound carriageway south from Claxton.

Continuing to travel north east 500 m from the Claxton junction there is a minor at grade junction with an unclassified road at Spitalbeck filling station. A further 300m is the point where a footpath (footpath 3) from south west of Harton crosses the A64. There is a short distance north of 50m to travel to rejoin the path which eventually leads up to Field House. The path provides a useful link from the A64 to the village of Harton.

Travelling north east from Claxton junction a distance of 2.1km the A64 single carriageway joins the dual carriageway at Barton Moor and is subject to the national speed limit.

450m north east of Barton Moor House a footpath (footpath 6) crosses the A64. A short section 30m runs for a distance west from the A64 to the access road to Barton Hill House. The other section of the footpath 650m runs directly opposite from the A64 east. The footpath has no formal signage and is not apparent on the ground. Due to the condition of the path frequent use is not the case but if well maintained and signed it could provide a useful link from A64 to Barton-le-Willows.

Travelling north east for a further 600m there is a footpath (footpath 7) which runs 1000m northwards from the A64; crosses the railway line and continues just below the summit of Sweet Hill to link into the lane east of Foston Hall. The footpath branches to Foston at Sweet Hill. The initial section of the footpath between the A64 and the railway line is overgrown and unsigned. This path if well maintained and signed could provide a useful link from Foston to Barton Hill.

A further 1.6 km along the dual carriageway is located Barton Hill at grade crossroads. The York to Malton railway crosses underneath the A64 300m south west of this junction which is also 70m north east of where the A64 crosses over Spital Beck. There are a number of domestic and light industrial buildings located either side of the A64 at this point.

The area of Barton Hill is essentially rural with emphasis on agricultural activities, farming, small business and private residential properties make up this small village. From the information available, there appears to be no community service within the village.

Travelling north west for a distance of 200m a footpath (footpath 8) crosses the A64. The path runs for 50m north and south east for 2km passing Pasture House and then rising in a north easterly direction Cliffe House Farm.

The A64 dual carriageway skirts around Whitwell-on-the-Hill which is located approximately 6km west of Malton Bypass. Whitwell –on-the-hill is located within the Howardian Hills which has been classified as an 'Area of Outstanding Natural Beauty' There two at grade accesses to Whitwell on the Hill from the A64 are located to the north and south of the village. In addition to the central reserve gaps that facilitate vehicle manoeuvres at these two junctions, there are also other gaps in the central reserve that accommodate two junctions to other villages on the south side of the A64, two accesses to Cliffe House Farm on the south and a junction to Foston on the north side of the A64, located west of the southern junction to Whitwell on the Hill.

The study area contains farming, business and private residential properties within a predominantly rural location, which are located as scattered individual buildings or groups and within the village of Whitwell on the Hill. There is no information available on community services within Whitwell on the Hill, the OS map indicates a church and a post office.

The footpaths and bridleways from Whitwell north to Malton are all within an 'Area of Outstanding Natural Beauty' A.O.N.B.

South east corner of Whitwell, to the west of the A64 (footpath 9) starts continuing for 1250m behind the bungalows at Beech View through the village and north west towards the Castle Howard Estate, behind Whitwell Hall Hotel, as the footpath climbs behind the village there are glimpses of the A64 but as the route crosses agricultural land north of the village the views of the A64 become more distant as it skirts Whitwell-on-the-hill. The footpath is located near to the Howardian Hills 'Area of Outstanding Natural Beauty'; the views from the footpath reflect this.

A bridleway (bridleway 1) connects with the A64 at Cliffe House Farm and follows a route south for a distance of 950m towards Crambe, along the top of Whitwell Cliff. At the start of the route the A64 is in full view, but as the bridleway drops away to the south, bounded by hedgerows, the A64 becomes hidden. This path also links to another route with public access south of the village of Crambe. Therefore it is considered of some importance to locals and visitors alike.

To the west of the A64 a footpath (footpath 11) runs 130m from the church at Whitwell-on-the-hill east across the A64 into the south. There is no opening through the roadside hedgerow on either side of the A64. The eastern section runs for 230m, the field to the east has been ploughed. The junction with Onhams Lane is signposted indicating a public right of way. The route in the field probably follows the hedgerow/ditch boundary converging with a public footpath adjacent to the A64. The path is part of a link of footpath routes from the village of Cramb to Whitwell-on-the-hill and therefore has some importance to locals and visitors alike.

South east of the church at Whitwell-on-the-hill a footpath (footpath 12) branches off (footpath 11) and crosses the existing A64 continuing to Shepherds Lane. The footpath continues beyond the property of Bellmire Hill where the A64 is screened by the valley side of the River Derwent.

Whitwell Road is located 700m north from Whitwell-on-the-hill a path runs from it's junction with the A64 at Tout Hill has a public right of way (footpath 10A) running north west along it's length eventually coming out at Welburn. The path is a link from Whitwell to Welburn.

South of Holmes Crescent (footpath 13) adjoins the A64 to the south east and continues for a distance of 600m south east where it intersects with (footpath 14) and terminates at The Old Station House. The path runs through a ‘Site of Special Scientific Interest’ S.S.S.I. and may be considered an important link path for locals and tourists alike between the A64, Crambeck and Whitwell-on-the-Hill.

South of Crambeck (footpath 14) runs south then south west for a distance of 2.2km intersecting with footpath 13 at a point half way along the route. The path follows a route roughly adjacent to the River Derwent through a ‘Site of Special Scientific Interest’ S.S.S.I.

West of Crambeck (footpath 15) runs for a length of 900m west along the western edge of Gillylees Wood and climbs Chanting Hill in the direction of Welburn Village and adjoin a bridleway at Chestnut Avenue. Crambeck contains leisure and community facilities. The village is made up of residential properties as well as small businesses some of which are agricultural. Crambeck is located within a ‘Site of Special Scientific Interest’ S.S.S.I.

North of Crambeck (bridleway 2) starts from the A64 for 800m taking a route west towards Hutton Hill, the bridleway follows a route along the ridge line, north after the house. There are panoramic views to the A64 across the Crambeck valley to Holmes Crescent from the ridge line. Views from the bridleway are screened by farm buildings at Hutton Hill. Once the route passes the farm the A64 is not visible. The bridleway appears to come to an end in open country side to the north, it does however join up with (footpath 16) at the house and a route can be taken south west back to Welburn. Where (bridleway 2) joins the A64 there is a link 200m north to another bridleway which runs south east for a distance of 1500m from the A64 following St Andrews Lane to Low Hutton. As the route follows St Andrews Lane there are panoramic views over the Derwent Valley. The link provides a scenic route for pedestrians and equestrians.

Located between the above bridleway is (footpath 17) which runs for 750m south east from the A64 eventually coming out at Low Hutton. The footpath runs adjacent to another path which runs parallel and into Low Hutton. Following the line of the River Derwent in an east/north easterly direction. Low Hutton consists of a mixture of residential, farm buildings and local amenities of which a post office and church are thought to be located.

The route of (Bridleway 3) runs for 1km, the route leaves the A64 to the west, skirts Leyland’s Hill and follows the access track north to Westerdale. There are clear views of traffic between the A64 and Clare Wood. The bridleway links into (bridleway 4) after 500m. (Bridleway 4) joins the A64 300m further north east and runs north west for 300m until it joins (bridleway 3). These bridleways are part of a system of rights of way linking villages and countryside to the west.

Located 50m north of bridleway 3 on the east side of the A64 is (footpath 19). This continues east for a length of 350m through Cocked Hat Wood towards Hutton Hall in High Hutton. High Hutton consists of a church, public house, residential and farm buildings.

Heading north along the A64 from High Hutton, 900m north east from (bridleway 4) is (footpath 21). This path runs from the east of A64 for a length of 900m south from the southern tip of Botterills Plantation and through Rudds Plantation and into High Hutton. The footpath is an important route forming a network of paths and bridleways at High Hutton, Low Hutton and Welburn linking with villages to the south of A64 all the way to Barton Hill a total length of over 7km.

Further north east for 850m from (footpath 21) is (bridleway 5) which joins west side of the A64 and runs for a length of 1km following Bramble Lane westwards past Sawkill Farm and on in the direction of Welburn Lane Farm.

Heading further up for 200m (footpath 22) joins to the south of the A64 at Bar Farm. This path runs for a length of 650m and follows a route south, away from the existing A64 towards Stanton's Wood. West of Low Farm the path turns and follows a south east direction eventually joining the lane leading to Low Hutton.

At the junction with the A64 and the unclassified road to Low Hutton a path (footpath 23) runs for a length of 700m taking a route north towards Cherry Farm where the footpath runs parallel to the A64 before turning east towards the edge of Malton.

14.3.1 The Legislative Framework Section 1

Legislation	Implications For
Countryside & Rights of Way Act 2000	Access to open country Public Rights of Way Areas of Outstanding Natural Beauty (AONB)
Environment Act 1995	Areas of Outstanding Natural Beauty, management plan for these areas produced by local authority and adopted on 31 March 2004, reviewed every 5 years
Environmental Protection Act 1990	Primary legislation supported by secondary legislation effecting all aspects of the environment
Wildlife & Countryside Act 1981	Site of Special Scientific Interest (SSSI) established and reviewed in 1992, requires local planning authorities and conservation agencies to oversee planning applications
EC Habitats & Species Directive	Special areas of conservation

14.4 Scheme Description of Section 1

The scheme is essentially an on-line widening with minor deviations off-line of the existing A64 at various locations along the route.

14.5 Identification of Impacts of Section 1

Construction Impacts

The impact on footpath no 2 is limited as the section of the A64 widening is to the west. Therefore access to the A64 will be unaffected. Access along North Lane will be affected significantly at the junction with the A64.

At Hazelbush the A64 is widened on-line to the west and off-line dualling to the east. Towthorpe Moor Lane and the unclassified road to Stockton-on-the Forest will be greatly affected as at this junction there is a proposed grade separated junction to be constructed.

At Sanburn Wood the existing cycle way on the A64 terminates. However, the cycle way will still be adversely effected by the off-line dualling to the east. The unclassified junction to Sand Hutton will be adversely by the off-line dualling although to the east. There is also a grade separated junction proposed at this junction.

At Claxton on-line widening to the west & east will adversely effect Whinny lane resulting in restricted access to the A64.

At Flaxton on-line widening to the west along Scotchman Lane will be restricted as proposed widening is to the west. Between the two unclassified roads at Flaxton & Claxton it is proposed to construct an at grade separated junction which will restrict the access link between these two roads and sever the existing cycleway on the A64. At the unclassified road at Spitalbeck filling station on-line widening to the west is proposed which will restrict access to the existing unclassified junction.

The impact on footpath no.3 crosses the A64 at a point where carriageway widening to the west is proposed. This will restrict access along the 50m of the A64 which joins the east and west stretches of this path.

At Barton Moor footpath no.6 crosses the A64 but will not be effected as the A64 is dualled along this section.

Operational Impacts

Any rights of way effected by the works should be re-routed to avoid major severance and disruption to users, subject to discussion with landowners. Consideration should be given to providing footways and cycleways on sections throughout the whole scheme. Previous consultation carried out by 'Bullens' indicated that this level of provision would be supported by the various consultees. The opinion was expressed that the current lack of facilities discourages cyclists and pedestrian use of the A64.

14.6 Possible Mitigation Measures of Section 1

Construction Impacts

Loss of access for users can be partly mitigated by provision of alternative temporary routes particularly along the A64 itself during the construction phase, subject to discussion with landowners.

Operational Impacts

In order to encourage pedestrians who need to cross the A64 and to use bus stops provision should be provided at the grade-separated junctions and a footway provided in the verge between the bus stop and the grade-separated junction. Where there are sites that no reasonable access to bus stops across the A64, such as at Crambeck. At Crambeck, Centenary Way crosses the A64, this is an important site of Special Scientific Interest. Consideration should be given to provision of an at-grade central reserve crossing at each site.

14.7 Impact Assessment of Section 1

Construction Impacts

The suggested mitigation measures should ensure that any community severance is kept to a minimum.

Operational Impacts

The suggested mitigation measures should ensure that any community severance is kept to a minimum.

14.8 Summary of Section 1

There it is likely that current routes travelled by pedestrians and others will be increased as a result of the off-line dualling, particularly where crossing the dual carriageway is involved. Mitigation measures discussed in this report would resolve some issues but there is no reliable information at present as to where the most frequently used crossing points are and so further investigation work and surveys into current pedestrian and others usage would be required.

The increased risk of pedestrians and others using facilities adjacent to a dual carriageway will be partly mitigated by improving links between the grade-separated junction for the use of pedestrians, equestrians and cyclists.

There are several footpaths which cross the A64 along the route from Hopgrove Junction to Musley Bank junction as marked on the plan. It is suggested here that all footpaths and bridle ways that either meet or cross the A64, would be diverted to cross the road via the nearest grade-separated junction. This would improve safety by segregating pedestrians and horses from the road traffic. Where possible these diversions would be alongside roads or accommodation tracks, but where this is not an option new paths would need to be constructed subject to consultation with landowners.

14.8.1 Limitations and Assumptions of Section 1

This assessment is based entirely on a desk top study carried out in October and November 2004 and with reference to surveys described in previous reports as listed in the Assessment Techniques and Methodology. As these reports are over 10 years old, details may be subject to some change. However, for the purposes of this assessment it is assumed that there is no significant change. Should the scheme proceed to the next stage detailed surveys of current rights of way will be required.

Within the time frame of this assessment it was not possible to agree the mitigation proposals with the Highways Agency, therefore these measures are subject to modification and development.

14.8.2 Potential Further Mitigation of Section 1

As mentioned previously in Section 8.2, the mitigation indicated has not been agreed by the Highways Agency. Further mitigation to improve the routes could involve the construction of additional footways, cycleways and bridleways to provide a safer route.

14.9 The Base Line Conditions of Section 2

North east of Malton the dual carriageway reverts to a single carriageway at Brambling Fields subject to the national speed limit.

Footpath (no. 24) joins the A64 338m east of where the single carriageway section starts. The path is to the south of the A64 and follows a route in a north easterly direction for 678m into Scagglethorpe.. The path serves as a link from Beck house to Scagglethorpe and Scagglethorpe Manor.

The next junction on the A64 is a ‘T’ junction serving the village of Scagglethorpe. Scagglethorpe is a medium size village containing a church, post office and public house.

Footpath (no.25) joins the A64 to the west and follows a route north west for 468m. From a desk top study it is not possible to determine the destination.

There is another ‘T’ junction 600m further on from Scagglethorpe which leads to Scagglethorpe Grange.

The proposed Rillington Bypass starts 300m further on from the Scagglethorpe Grange turn off, at a point south west of Rillington

Footpath (no.26) runs from the south of Rillington in a south east direction for 315m across the school playing fields and will cross the proposed Rillington Bypass at ‘Outgoing Plantation’. From here the path joins path (no.27) turning and heading north east for a distance of 1540m adjacent to the route of the Rillington Bypass.

Footpath (no.28) which runs for 1540m south east from the south of Rillington and crosses the proposed Rillington Bypass joining up with footpath (no.27). There is a network of footpaths in the Rillington Area which will be effected by the Rillington bypass. This may be an opportunity to consolidate some of these following consultation.

460m past the end of the Rillington Bypass there is a small ‘T’ junction with Sandy Lane opposite this junction is footpath (no.29). This path runs for 818m, running from Rock \House Plantation which is west of West Knapton; south east and joins the A64 @ Sandy Lane junction providing access into Sands Wood.

240m past Sandy Lane junction is the junction with the B1258 into West Knapton . At this junction footpath (no.30); is located 40m from the A64. This path heads in a north easterly direction for 600m south of West Knapton and across the park of Knapton Hall joining with footpath (no.32). A further 465m past the junction with the B1258 is a second ‘T’ junction with West Knapton. 90m past this junction is footpath (no.31) ‘Knapton Wold Track’. This path follows a route south of West Knapton joining the A64 to the south heading south east joining Knapton Wold Road providing a link to Centenary Way. 140m north west of this junction is where footpath (no.30) joins footpath (no.32). Footpath (no.32) follows a route 715m north west across Knapton Hall Park terminating at Mill Grange to the north of the A64.

Mill Grange; approximately 1.5km east of East Knapton is located footpath (no.33). This path joins the A64 to the south and follows a route south across Knapton Grits joining Centenary Way across Knapton Wood. This path provides a link between Centenary Way and West & East Knapton.

3km north east of West Knapton is located the small village of West Heselton; 1km further long the A64 heading north west is located footpath (no.34) this path follows a route south then north east for 745m into East Heselton where the path joins up with footpath (no.35). East Heselton consists of a hall, public house and a hotel.

Footpath (no.35) follows a route a distance of 1200m heading south from East Heselton and the A64 for where the path crosses Centenary Way. The footpath then continues south towards East Heselton Wold.

West of Sherburn; which is a medium size village 9.5km south west of Seamer Footpath (no.36) follows a route for 711m south from Sherburn and joins up with Centenary Way to the south west at Sherburn Brow. Sherburn is a medium size village containing a church, hall, public house a school, sports facilities and local shops.

South east of Sherburn is footpath (no.37) which joins the A64 and follows a route south east for 110m to Low Mill Farm. North of A64 the path heads for 500m north east adjacent to the works; where it joins footpath (no.38) and then north for 500m, where the path provides a link up into Sherburn Ings and the river Derwent.

Ganton is a small village located 3km north east of Sherburn and contains public house, church, post office and a village hall. The A64 bisects Ganton; footpath (no.39) which forms part of the Centenary Way strategic route follows a route for 2.3km south west running parallel with the A64 from the intersection with footpath (no.40) south east of Ganton village.

South west of Ganton approximately 300m from the A64, footpath (no.40) is located; which also forms part of Centenary Way. Apart from at Crambeck where Centenary Way actually crosses the A64, this is the closest that Centenary Way comes to the A64 along the scheme route. Centenary Way is also referred to as Wold's Way at this location. Path (no.40) intersects with path (no.39) and runs for 1.8km from south west of Ganton north west parallel with the A64.

Staxton is a medium size village located 3km north east of Ganton along the A64 heading towards Seamer. Staxton has a church, a school, and other local amenities. Footpath (no.41) is located south west of Staxton, the path runs from the north of the A64 for a length of 600m past Manor House Farm in a north easterly direction then turns south towards the A64 and crosses the A64 continuing south through Staxton Brow.

Footpath (no.42) follows a route north along Ings Lane for a length of 1100m. Lings Lane is located approximately in the middle of Staxton and eventually links to Willerby Carr Lane and onto Seamer Ings crossing the river Hertford.

Footpath (no.43) follows a route along Staxton Carr Lane which is 260m further along the A64 and parallel to Lings Lane and footpath (no.42). Path (no.43) runs for approximately 2km north heading in the direction of Seamer.

14.9.1 The Legislative Framework Section 2 On-Line

Legislation	Implications For
Countryside & Rights of Way Act 2000	Access to open country Public Rights of Way Areas of Outstanding Natural Beauty (AONB)
Environment Act 1995	Areas of Outstanding Natural Beauty, management plan for these areas produced by local authority and adopted on 31 March 2004, reviewed every 5 years
Environmental Protection Act 1990	Primary legislation supported by secondary legislation effecting all aspects of the environment
Wildlife & Countryside Act 1981	Site of Special Scientific Interest (SSSI) established and reviewed in 1992, Requires local planning authorities and conservation agencies to oversee planning applications
EC Habitats & Species Directive	Special areas of conservation

14.10 Scheme Description of Section 2 On-Line

The scheme is essentially an on-line dualling. However, does include the off-line dualling proposal at Rillington.

14.11 Identification of Impacts of Section 2 On-Line

Construction Impacts

The grade separated junction at Scagglethorpe will impact on footpath (no. 24) severing the link with the A64 access road north of Scagglethorpe House.

The Rillington Bypass will sever the existing A64 to the west of Rillington. Collinsons Lane will be severed south of Rillington Footpath (no.26) &(no.27) will be severed where it joins Sand Lane which is also in line with the new route of the Rillington Bypass.

Footpath (no.28) is severed south east of Rillington Bypass where it joins path (no.27). The access to Scampston Mill Farm which will be severed at the north eastern end of the Rillington Bypass.

Footpath (no.29) joining the A64 would no longer provide a route to Sandy Lane as the new route crosses at this junction.

The new route will cross the A64 north east at the unclassified junction to East Knapton.

Footpath (no.32) will be crossed by the new route severing the link between Mill Grange and Knapton. The unclassified road from West Heselton heading north west up to West Heselton Carr will be severed by the new route.

West of East Heselton the new route crosses the A64 south east and severs footpath (no.34 & no.35) south of East Heselton

The new route joins up with the A64 south of Heselton Grange.

At Sherburn Lodge the new route diverts south of the A64 and in effect bypasses Sherburn severing footpath (no.36) at Lutton Gate. South of Sherburn there is an unclassified road leading from St Hilda's Street which will be severed by the new grade separated junction along with High Mill farm and possibly the fringes of the housing estate at 'The Pastures'.

300m further east the route severs footpath (no.37) which will sever Low Mill farm from Sherburn.

520m further north the new route again crosses the A64 at Gladvic Farm and for 1km the route runs parallel to the existing A64 on the northern side. The access road to the pumping station will be severed north of the Grits before the new route crosses over the A64 in an easterly direction running through Glebe Farm causing disruption and severing a farm building.

A grade separated junction south of Ganton will sever footpath (no.40) and cause disruption to the Nursery Plantation and possibly the residential housing and the village hall. Footpath (no.40) is severed again 545m further north at the Binnington junction the new route severs the Binnington Carr Lane from the A64.

2km further north the proposed route severs footpath (no. 42) at Willerby Carr Lane crossing the River Derwent parallel to the railway line.

1km further north the new route severs the access road into Seamer Carr Farm. The new route follows this line north east for 330m severing the access road to three residential properties before terminating at the Seamer roundabout.

Operational Impacts

Any rights of way effected by the works should be re-routed to avoid major severance and disruption to users, subject to discussion with landowners. The greatest impact will be in the location of the grade separated junctions. This impact has the potential to be considerable, considering the size of junction.

Consideration should be given to providing footways and cycleways on sections throughout the whole scheme. Previous consultation carried out by 'Bullens' indicated that this level of provision would be supported by the various consultees. The opinion was expressed that the current lack of facilities discourages cyclists and pedestrian use of the A64.

14.12 Possible Mitigation Measures of Section 2 On-Line

Construction Impacts

Loss of access for users can be partly mitigated by provision of alternative temporary routes particularly along the A64 itself during the construction phase, subject to consultation and discussion with landowners.

Operational Impacts

In order to encourage pedestrians who need to cross the A64 and to use bus stops provision should be provided at the grade-separated junctions and a footway provided in the verge between the bus stop and the grade-separated junction. Where there are sites that no reasonable access to bus stops across the A64, consideration should be given to provision of an at-grade central reserve crossing at each site.

14.13 Impact Assessment of Section 2 On-Line

Construction Impacts

The suggested mitigation measures should ensure that any community severance is kept to a minimum.

Operational Impacts

The suggested mitigation measures should ensure that any community severance is kept to a minimum.

14.14 Summary of Section 2 On-Line

There are several footpaths which cross the A64 along the route from Malton to Seamer as marked on the plan. It is suggested here that that all footpaths and bridle ways that either meet or cross the A64, would be diverted to cross the road via the nearest grade-separated junction. This would improve safety by segregating pedestrians and horses from the road traffic. Where possible these diversions would be alongside roads or accommodation tracks, but where this is not an option new paths would need to be constructed subject to consultation with landowners. Limitations and Assumptions of Section 2 from Malton Bypass On-Line (at Brambling Fields) to Seamer Bypass (at Seamer Carr

This assessment is based entirely on a desk top study carried out in October and November 2004 and with reference to surveys described in previous reports as listed in the Assessment Techniques and Methodology. As these reports are over 10 years old, details would be subject to some change. However, for the purposes of this assessment it is assumed that there is no significant change. Should the scheme proceed to the next stage detailed surveys of current rights of way will be required.

Within the time frame of this assessment it was not possible to agree the mitigation proposals with the Highways Agency, therefore these measures are subject to modification and development.

14.14.1 Potential Further Mitigation of Section 2 On-Line

As previously mentioned in Section 14.2 no mitigation at this stage has been agreed with the Highway Agency. Further mitigation to improve the scheme could involve the construction of additional roadside footways, cycleways and bridleways to provide a safer scheme.

14.15 The Base Line Conditions of Section 2 Off Line

North east of Malton the dual carriageway reverts to a single carriageway at Brambling Fields subject to the national speed limit.

The access road approximately 900m in length, which services Marr House and Beck House joins the A64, 1km east of the start of the scheme, at Malton.

Scagglethorpe Lane is located approximately 2.2km north east of the tie-in with the existing A64 Malton bypass. Scagglethorpe Lane terminates at the level crossing where it converts to a track. The lane is an access road which services a small number of farm buildings from the existing A64.

Footpath (25A) follows a route for 2km from the existing A64 West Moor Lane track, 1km south west of Rillington. The path follows a route across West Moor terminating at the Manor house.

Low Moor Lane follows a route north of Rillington heading north west. The lane continues across the level crossing providing access for a small number of farm buildings, eventually terminating at Rillington Low Moor.

Rillington is a medium size village containing , a mixture of farm buildings and residential buildings, a church, public house, school and local shops.

Outgang Lane follows a route for 870m from the village of Scampston. The route continues north west up into High Carr Plantation where it links with a network of other public footpaths.

Back Lane follows a route north east of Scampston before heading north west. North Lane crosses the level crossing and heads up into Redcarr Plantation.

Footpath (29A) follows a route for 102km from Scampston north east towards the sewage works, to the west of the proposed grade separated junction.
Scampston is a small village adjacent to Scampston Park and hall, located 1km north east of Rillington. Scampston comprises of church, a mixture of farm and residential buildings

The B1258 which follows a route for approximately 1km north from its junction with the A64

Footpath (32A) follows a route for 700m from West Knapton heading north.

Footpath (32B) follows a route for 625m from path 32 at East Knapton heading north towards the electrical sub station.

Knapton is a small village located approximately 2.5km north east of Rillington and combines West and East Knapton, containing a post office, Knapton Hall and there is a Roman site of importance just to the east of East Knapton.

Station Road follows a route north west of West Heselton. Footpath (33A) follows a route north for 1.2km from west Heselton joining Station Road 200m south of the level crossing.

Footpath (33B) follows a route for 1.7km from the sand and gravel pit north west of the A64. The route crosses through West Heselton Carr.

East Heslerton Lane following a route west of East Heslerton heading north for approximately 1km and servicing a small number of residential and farm buildings.

Carr Lane runs from East Heslerton north, 1km from the junction with the A64 passing through sewage works and several residential properties to the east of East Heslerton.

St Hilda’s Street, north of Sherburn and follows a route from its junction with the A64 heading in a northerly direction for 1km.

Footpath (35A) follows a route for 1.5km east of Sherburn in a northerly direction. Sherburn is a medium size village 9.5km south west of Seamer. Sherburn contains a church, hall, public house a school, sports facilities and local shops.

Ings Causeway is a track which follows a route north west from Potter Brompton, which is to the south of the A64. Potter Brompton is located approximately 7km south west of Seamer. Potter Brompton is a small village adjacent to the Potter Brompton Plantation and consists of a mixture of residential and farm buildings.

North of Ganton at it’s junction with the A64 there is an unclassified road which follows a route for approximately 1km, north west of Ganton. Ganton is a small village located 3km north east of Sherburn and contains public house, church, post office and a village hall.

Binnington is a small village located 3.7km south west of Seamer on the A64. From Binnington, Binnington Carr Lane heads north west and crosses the railway line and forms a track.

Footpath (no.42) follows a route north along Ings Lane for a length of 1100m. Lings Lane is located approximately in the middle of Staxton and eventually links to Willerby Carr Lane and onto Seamer Ings crossing the river Hertford.

There is a local access road which services Seamer Carr Farm from the west of the A64. This road also links into the other unclassified road which joins the A64 and services three farm buildings to the north of the off-line route.

14.15.1 The Legislative Framework Section 2 Off-Line

Legislation	Implications For
Countryside & Rights of Way Act 2000	Access to open country Public Rights of Way Areas of Outstanding Natural Beauty (AONB)
Environment Act 1995	Areas of Outstanding Natural Beauty, management plan for these areas produced by local authority and adopted on 31 March 2004, reviewed every 5 years
Environmental Protection Act 1990	Primary legislation supported by secondary legislation effecting all aspects of the environment
Wildlife & Countryside Act 1981	Site of Special Scientific Interest (SSSI) established and reviewed in 1992, Requires local planning authorities and conservation agencies to oversee planning applications
EC Habitats & Species Directive	Special areas of conservation

14.16 Scheme Description of Section 2 Off-Line

The scheme is essentially an off-line dualling. Please see the introduction to this report for a full description.

14.17 Identification of Impacts of Section 2 Off-Line

Construction Impacts

The access road servicing Marr House is severed by the off-line route severed 200m north of its junction with the A64.

Scagglethorpe Lane is severed by the off-line route, 370m south east of the railway line at Scagglethorpe Grange.

Footpath (25A) is crossed by the off-line route of the Rillington Bypass 400m north east of the tie in with A64 and approximately 100m south east of the railway line.

Low Moor Lane, north of Rillington is severed by the off-line route 100m south east of the railway line.

Outgang Lane is severed by the off-line route approximately 100m south east of the railway line; 700m north west of Scampston.

Back Lane is severed by the off-line route approximately 70 m South east of the railway line at Low Gate House, north of Scampston.

Footpath (29A) is severed by the off-line route to the south of the sewage works; north east of Scampston.

B1258 is severed by the off-line route at the grade separated junction, 300m south of the railway line at Knapton, 1km north of the A64 junction. There will be extensive works in the locality due to the proposed grade separated junction.

Footpath (32A) is severed by the off-line route approximately 270m south east of the railway line, 300m east of the proposed grade separated junction south of Knapton Station.

Footpath (32B) is severed by the off-line route; 265m west of the electrical sub station, north east of Knapton.

Station Road is severed by the off-line route 1.5km, 200m south of the railway line at the disused Heselton Station and crosses the off-line route just east of Station Road approximately 300m south of the level crossing.

Footpath (33B) is severed by the off-line route south of the railway line at the level crossing at West Heselton adjacent to the railway line.

East Heselton Lane where it crosses the off-line route just south of the railway crossing at West Heselton Gate.

Carr Lane is severed by the off-line route 60m south of the railway line approximately 1km north of east Heselton.

St Hilda's Street is severed by the off-line route at the proposed grade separated junction, 300m south of the railway line level crossing at Station Cottages. There will be extensive works involved during the construction phase of this junction.

Footpath (35A) is severed by the off-line route 270m east of the proposed grade separated junction which is south of the level crossing at Station Cottages north of Sherburn.

Ings Causeway is a track which is severed by the off-line route 1.2km to the north of its junction with the A64, approximately 100m south of the railway line.

The unclassified road which follows a route north of Ganton is severed by the off-line route 160m south of the railway crossing at the disused Ganton Station.

Binnington Carr Lane is severed by the off-line route approximately 500m north west of the A64 and 110m south of the level crossing at Binnington Cottages. There is a proposal to construct a grade separated junction at this point which will require extensive construction related works.

Footpath (42) is severed by the off-line route approximately 1km north of Staxton at a point where the off-line route also crosses the River Hertford. There will therefore be substantial disruption due to construction in this location.

The access road that services Seamer Carr farm is severed by the off-line route to the east of the railway line 600m south west of the termination point of the off-line route at the Seamer roundabout.

Operational Impacts

Any rights of way effected by the works should be re-routed to avoid major severance and disruption to users, subject to discussion with landowners. The greatest impact will be in the location of the grade separated junctions. This impact has the potential to be considerable, considering the size of junction.

Consideration should be given to providing footways and cycleways on sections throughout the whole scheme. Previous consultation carried out by 'Bullens' indicated that this level of provision would be supported by the various consultees. The opinion was expressed that the current lack of facilities discourages cyclists and pedestrian use of the A64.

14.18 Possible Mitigation Measures of Section 2 Off-Line

Construction Impacts

Loss of access for users can be partly mitigated by provision of alternative temporary routes particularly along the A64 itself during the construction phase, subject to consultation and discussion with landowners.

Operational Impacts

In order to encourage pedestrians who need to cross the A64 and to use bus stops provision should be provided at the grade-separated junctions and a footway provided in the verge between the bus stop and the grade-separated junction. Where there are sites that no reasonable access to bus stops across the A64, consideration should be given to provision of an at-grade central reserve crossing at each site.

14.19 Impact Assessment of Section 2 Off-Line

Construction Impacts

The suggested mitigation measures should ensure that any community severance is kept to a minimum.

Operational Impacts

The suggested mitigation measures should ensure that any community severance is kept to a minimum.

14.20 Summary of Section 2 Off-Line

There are several footpaths which cross the A64 along the off-line route from Malton to Seamer as marked on the plan. It is suggested here that that all footpaths and bridle ways that either meet or cross the A64, would be diverted to cross the road via the nearest grade-separated junction. This would improve safety by segregating pedestrians and horses from the road traffic. Where possible these diversions would be alongside roads or accommodation tracks, but where this is not an option new paths would need to be constructed subject to consultation with landowners.

14.20.1 Limitations and Assumptions of Section 2 Off-Line

This assessment is based entirely on a desk top study carried out in October and November 2004 and with reference to surveys described in previous reports as listed in the Assessment Techniques and Methodology. As these reports are over 10 years old, details may be subject to some change. However, for the purposes of this assessment it is assumed that there is no significant change. Should the scheme proceed to the next stage detailed surveys of current rights of way will be required.

Within the time frame of this assessment it was not possible to agree the mitigation proposals with the Highways Agency, therefore these measures are subject to modification and development.

14.20.2 Potential Further Mitigation of Section 2 Off-Line

The mitigation indicated has not been agreed by the Highways Agency. Further mitigation to improve the routes could involve the construction of additional footways, cycleways and bridleways to provide a safer route.

14.21 Overall Summary

The two sections are a combination of on-line widening and off-line dualling. Both routes will significantly effect the current arrangements and does not improve the situation for pedestrians, cyclists and equestrians taking into account the number of rights of way that are effected by the scheme.

Severance is an issue but at present information is unclear as to the effects that the scheme will have on access to community facilities, as the current usage of the existing rights of way is unknown. However, it is worth considering here that journeys to community facilities are likely to be made by car, bus or cycle. Public rights of way are likely to be used primarily for leisure purposes

15 DRIVER VIEW

15.1 Introduction

This chapter reports on part of the assessment of potential impacts of the schemes on vehicle travellers using the A64 between York (at A1237 Hopgrove junction) and Malton (at B1248 Musley Bank Junction). The two parts of the assessment look at impacts on the view from the road, and impacts on driver stress.

Views from the Road

The existence of a new road, or upgrading to an existing road, may enable more road users to see the landscape than hitherto. Conversely, disbenefits may arise where a road passes through heavily industrialised or other visually unattractive areas, or where existing views are reduced where a road passes through new cuttings, tunnels or vegetation. This assessment is reported in this chapter.

Driver Stress

Driver Stress is defined as the adverse mental and physiological effects experienced by a driver traversing a road network. Factors involved include road layout and geometry, surface riding characteristics, junction frequency and speed and flow per lane. Taken together, these factors can induce in drivers feelings of discomfort, annoyance, frustration or fear culminating in physical and emotional tension that detracts from the value and safety of a journey. This assessment is reported in Chapter 16.

15.2 Assessment Techniques and Methodology

15.2.1 Guidelines

This assessment has been carried out in accordance with the Highways Agency's *Design Manual for Roads and Bridges, Volume 11 Section 3 Part 9, "Vehicle Travellers"* (DMRB). DMRB specifies that "generally, at [Stage 1], assessment of views from the road will not be a significant factor. However in exceptional cases, for example where a study area includes an area of outstanding landscape value, assessment should be undertaken at this stage." In the case of the A64, between York and Seamer the road passes through or close to the Howardian Hills Area of Outstanding Natural Beauty (AONB), the Yorkshire Wolds Area of High Landscape Value (AHLV) and the North York Moors National Park (some distance away across the Vale of Pickering). Therefore a basic assessment has been made which should be expanded at Stage 2.

15.2.2 References

A number of studies of upgrading schemes for the A64 have been carried out. However, most have referred to economics, road safety and engineering aspects. For the Driver View assessment, the Scheme Assessment Reports for the Rillington Bypass and the York to Malton Improvements, produced in 2000 by W S Atkins, appear to be the only relevant documents.

15.2.3 Methodology:

Baseline Survey

The baseline survey consisted of a desktop study in October and November 2004, and a car-borne route survey on 11th November 2004. In the course of the survey all relevant side roads

were considered, and traveller views were considered in conjunction with landscape and visual impact effects. The route was driven in both directions, and views on both sides of the road were considered.

Definition of Scales of Impact

DMRB does not specify scales of impacts for traveller views, but suggests the following four categories which can be used to describe traveller views:

- No view – road in deep cutting or contained by earth bunds, environmental barriers or adjacent structures.
- Restricted view – frequent cuttings or structures blocking the view.
- Intermittent view – road generally at ground level but with shallow cuttings or barriers at intervals.
- Open view – view extending over many miles, or only restricted by existing landscape features.

DMRB points out that many people are visually tolerant of minor interruptions to views seen from a vehicle and interruptions do not detract from their perception of the scene. In the case of the A64, this particularly applies where views are generally open over the Vale of York between York and Barton Hill, interrupted only by gappy hedges, buildings, stands of trees and other obstructions, and between Rillington and Seamer, where views are similarly open over the Vale of Pickering to the north and towards the Yorkshire Wolds to the south.

Development of Possible Mitigation Measures

Mitigation measures are those which are included in the design to reduce adverse environmental impacts or to enhance beneficial environmental impacts of the scheme. At Stage 1, before detailed route options have been considered or engineering designs developed, mitigation measures are described only in general terms. At later stages detailed mitigation, specific to the scheme in question, will be designed and described. Part of the process of mitigation design should be to ensure that mitigation for one environmental impact does not adversely affect another environmental factor. For example, mitigation to reduce the visual impact of a scheme by screen planting may adversely affect travellers' views.

Assessment of Impacts

Impacts are assessed by means of a comparison between the existing situation and the likely or possible situation in the event that the scheme is built. At this stage a descriptive approach is used, because too little information is available about the final design of the road.

Limitations to Surveys or Assessments

At this stage, Stage 1, the assessment is of the overall route corridor. No preferred route alignment has been selected, no junctions designed, no detailed engineering designs made, and no vertical alignments completed. Furthermore, no mitigation in respect of other environmental impacts has been finalised. Therefore only the most sketchy assessment of impacts on travellers' views can be made. A very broad-scale description of both the existing and the likely post-scheme situation is employed, and no attempt is made to describe the situation in any detail.

Assumptions in the Assessment

None.

The Legislative Framework

No legislation is directly relevant to the assessment of travellers' views.

15.2.4 The Base Line Conditions of Section 1 York to Malton

The route is described in all sections of this report travelling towards the north-east (i.e. from York in the direction of Seamer).

Between York and Barton Hill the landscape is mainly flat and open, allowing wide, long-distance views from the road where they are unconstrained by vegetation or buildings:

- In the area of Huntington, near to the York bypass, the road is passing through the outermost reaches of York's suburban fringe. Views are generally open, restricted by some domestic coniferous hedges and some other high hedges set back from the road;
- Passing Hazelbush Farm views are extensive over the big open fields of Stockton Common, constrained in the far distance by shelter-belt and other plantations;



Figure 1: The view due south from the A64 near Hazelbush Farm

- Beyond Hazelbush the road passes through King's Moor Plantation, with a variety of land use types in blocks. Birch woodland on the north side of the road constrains views, and the plantations on the south side dominate the scene in that direction. Hedges are gappy and low allowing long distance views to the plantations;
- In the area of Lobster House views to the south are very open, although to the north Averham Plantation constrains them somewhat. Hedges are very variable in height, species and quality, but generally do not constrain views;
- At Harton Lodge Farm the landscape begins to undulate slightly, fields are rather smaller, and views are somewhat more enclosed;
- By Stugdale House the landscape and the views have opened out once more, constrained more by the very slight undulation of the landscape than by any vegetation;
- Just before Barton Hill views are extremely extensive in all directions over the rather scrubby verges and very low hedges. Whitwell-on-the-Hill is visible to the north-east. Barton Hill junction itself is in a sudden dip in the road, approaching from the south-west. From Barton Hill to Malton the landscape has a different character, as the road ascends from the Vale of York and passes through the south-east end of the Howardian Hills Area of Outstanding Natural Beauty. This landscape consists of a range of rolling hills with, in most places, a relatively complex topography (compared with the Vale) which restricts long distance views:

- Passing Whitwell-on-the-Hill the landscape is wooded and undulating, and the roadside hedgerows contain many mature trees. Westbound travellers have extensive views over the Vale of York as they descend Whitwell Hill, but views are more restricted towards the east by vegetation and cuttings as well as by the topography. Some views are still gained into the valleys in the hills;



Figure 2: The view over the Vale of York to the west from Whitwell Hill

- Around Welburn junction the landscape is very enclosed by mature ground vegetation. The road itself is more sinuous than it is further west and allows fewer opportunities for views. Cram Beck runs through a distinct small valley;
- At Hutton Hill wide views are available, especially to the west, where they are not constrained by the blocks of plantation and semi-natural woodland. The landscape is rolling, hedges low and verges wide;



Figure 3: The Howardian Hills – looking east towards Huttons Ambo from Hutton Hill

- Approaching High Hutton the road is enclosed within a landscape bowl on the plateau. Views here are much more constrained once again, this time more by the shape of the landscape than by the woodland or the hedgerow vegetation;
- Between High Hutton and Golden Hill the road is lined by mature trees, fields are small and there are several small woodlands. Views are enclosed, constrained both by the landform and the vegetation, perhaps slightly more open towards the north;

- Descending Golden Hill eastbound wide views are available, to the south over the rural landscape (marred somewhat by some pylon lines) and to the east over the industrial western fringe of the town of Malton. Westbound travellers have similar views to the south and pleasant open views of Golden Hill itself as they ascend from the western end of the Malton bypass.



Figure 4: Road signs, industrial units and pylons at the western end of the Malton bypass.

15.3 Scheme Description of Section 1 York to Malton

The purpose of a Stage 1 Assessment is to analyse the overall proposed route corridor, and no detailed designs have yet been developed. However, the essential aspects of the probable design are as follows:

- The new road is likely to follow the alignment of the existing route for most of the distance from York to Malton;
- A small diversion off-line to the south-east is likely between King's Moor Plantation and the laboratory at White Syke Farm. The diversion would be less than 1,000m in length and would deviate from the line of the existing road by a maximum of about 200m. Its purpose is to move the new road away from a historic monument on the north side of the road. It would also move the road further from the Four Alls and The Tanglewood public houses;
- A similar length of off-line diversion is proposed, this time to the north of the existing road, between the side roads to Hutton Hill (on the north side of the road) and High Hutton (on the south side). This off-line diversion straightens an existing winding section of road where it passes over Hutton Hill;
- A further slightly off-line diversion to the north is provided where the road descends from Golden Hill, past Bar Farm, in order to straighten the alignment on this fast stretch of road.

Vertical alignment (the design of cuttings and embankments in relation to the surrounding ground level) has not yet been established.

15.4 Identification of Impacts of Section 1

Construction Impacts

Likely impacts on driver views during the construction phase of the scheme are as follows:

- Improved views caused by temporary removal of roadside vegetation for road widening works;
- Interrupted views caused by plant, machinery, earthworks, temporary storage of material, traffic management measures and other construction activities.

Operational Impacts

Likely impacts on driver views during the operational phase of the scheme (that is, after construction is complete) are as follows:

- Improved views in some places, and reduced views in others, caused by changes to the vertical alignment of the road (where the new road is placed on embankments or in cuttings);
- Slightly different views available from places where the horizontal alignment of the road is altered;
- Reduced views caused by planting designed to reduce the visual and landscape impact of the new road.

15.5 Possible Mitigation Measures of Section 1

Mitigation in respect of impacts on driver views is usually addressed during the detailed design of a new road scheme. It is also important that mitigation in respect of other environmental impacts does not unduly increase the impact on driver view. For example, screen planting alongside the road, designed to reduce the visual impact of the road, should be designed so as to allow at least intermittent views of the surrounding countryside; the same applies in respect of planting in response to landscape character impacts. These issues should be addressed by means of discussion of mitigation measures at multi-disciplinary mitigation workshops.

15.5.1 Impact Assessment of Section 1

This section of the report assesses the specific impacts of this scheme upon the travellers passing along it during and after construction.

Construction Impacts

No detailed design or construction method statements have yet been developed. Therefore it is impossible at this stage to predict what construction impacts will be. It is likely, however, that they will include those impacts referred to in Section 5 above.

Operational Impacts

The vertical and horizontal alignments of the new road, and the proposed mitigation in respect of other environmental impacts, have not yet been developed. Therefore it is impossible at this stage to predict what specific impacts will be caused on travellers' views after construction is complete. However, some general observations can be made:

No major deviations from the existing route alignment are proposed. Generally, therefore, views will be over the same areas as those from the existing road. Where deviations are proposed, they run through landscape similar to that through which the existing road runs. No major earthworks or structures are envisaged. Therefore changes in the vertical alignment will cause little impact on the extent of the views from the main line.

It is likely that more grade-separated junctions would be provided for side roads. Improved views would therefore be available for travellers on side roads while on the elevated sections, but this would be a very minor impact and would not affect through-travellers.

Overall, it is assessed that there is unlikely to be any significant impact on travellers' views due to construction of the scheme.

15.6 Summary of Section 1

The scheme requires only minor changes to the horizontal alignment of the road, and changes to the vertical alignment are likely to be small although they are not yet finalised. For these reasons there is likely to be a neutral impact on travellers' views, although the design of measures in mitigation of other environmental impacts should take into consideration impacts on views from the road.

15.6.1 Limitations and Assumptions

At this stage, Stage 1, the assessment is of the overall route corridor. No preferred route alignment has been selected, no junctions designed, no detailed engineering designs made, and no vertical alignments completed. Furthermore, no mitigation in respect of other environmental impacts has been finalised. Therefore only the most sketchy assessment of impacts on travellers' views can be made.

15.6.2 Potential Further Mitigation

No further mitigation is proposed in respect of impacts on travellers' views.

15.7 The Base Line Conditions of Section 2 On-Line and Off Line Routes

The route is described in all sections of this report travelling towards the north-east (i.e. from York in the direction of Seamer).

Between Malton and Rillington the road curves through agricultural land with frequent roadside buildings, fences and other features. Views are generally intermittent, constrained to the east by the approaching hills of the Yorkshire Wolds:

At Brambling Fields, where the road leaves the Malton bypass, views are extensive and long-distance to the north, west and south, although constrained to the east by the Wolds. Hedges are low and buildings few;

Passing Scagglethorpe views are wide open to the north-west but hills are now close to the south-east. The view is of a utilitarian agricultural landscape;



Figure 5: The view south-east towards Scagglethorpe from the A64; the foothills of the Yorkshire Wolds beyond.

Around Rillington Fields (about 1000m west of Rillington) views remain open to the north and west, and are more constrained by the hills to the south and east. Linear settlement urbanises the character of the road, which skirts the rising topography to the south, possibly following spring-line villages.

From just west of Rillington, and on all the way to Seamer, the road takes on a different character. All along this section extensive views over the Vale of Pickering are available to the north of the road, while the rising slopes of the Yorkshire Wolds dominate views to the south:

- Before and after Rillington views are very wide to the north (to the hills of the North York Moors National Park) and east (to the hills around Wintringham Hill). In Rillington itself the view is of village buildings only;



Figure 6: The view over the Vale of Pickering to the north towards the North York Moors from Rillington Fields.

- Passing Scampston, views are more constrained by vegetation, and in particular by shelter belt plantations. There is a very good view of Scampston Hall to the north, where the main road crosses the artificial lake in the Hall's parkland, but it is at best glimpsed briefly and will not be seen at all by drivers who will be fully occupied in negotiating the bend in the road;
- At Knapton Hall the landscape is very open on all sides, with long distance views over the low hedges and through the unkempt former parkland of Knapton Hall itself;
- Views are even more open and uninterrupted at Mill House, where the buildings do not significantly affect the views from the road;
- Passing West Heselton the views are slightly less good due to banked up hedgerows, shelter belts of Scots Pine and a rather narrower road;



Figure 7: Travelling east between West Heselton and East Heselton

- At East Heselton the hedges are replaced by fences as the road passes through the settlement;
- From East Heselton to Potter Brompton views are very open over the low and gappy hedges. East of Sherburn fields are vast and flat, with only a few coniferous shelter belts interrupting views here and there;

- Approaching Ganton the slopes of the Yorkshire Wolds to the south of the road start to push further north, and consequently the road rises slightly higher relative to the Vale of Pickering to the north. Around Ganton itself there are more shelter belts and other trees (although the Wolds are less vegetated than they are further west), and the road is narrower and more undulating;
- By Staxton the road has risen slightly higher again relative to the Vale, and views over it are consequently very extensive. There are very few hedges;
- From Staxton to the end of the scheme at Seamer Carr the road drops down once again to the level of the Vale itself. However, views remain very extensive to the west and north because there are no hedges, although some plantation woodland constrains views to the east.



Figure 8: The view south towards Staxton from Seamer Carr, at approximately the place where the new road will approach the Seamer bypass. Traffic moving on the existing A64 is just visible at the bottom of the slope of the Yorkshire Wolds in the far distance.

15.8 Scheme Description of Section 2 On Line and Off Line Routes

The purpose of a Stage 1 Assessment is to analyse the overall proposed route corridor, and no detailed designs have yet been developed. However, the essential aspects of the probable design are as follows:

15.8.1 Scheme Description of Section 2 On Line Route

- The new road is likely to follow the approximate existing route corridor for most of the distance from Malton to Seamer;
- The new road will probably deviate north of the existing road for about 1000m to pass north of Rillington Fields, before crossing to the south of the existing road between Rillington Fields and Rillington;
- The new road will pass Rillington, Scampston, West Knapton and Knapton Hall south of the existing road, before crossing to the north side of the existing road once again between Knapton Hall and Mill House;
- The new road will leave Mill House to the south and pass between West Heslerton and Sand Land Farm before crossing the existing road once again between West Heslerton and East Heslerton;
- The new road will leave East Heslerton to the north, rejoin the existing A64 briefly between Heslerton Grange and Sherburn Lodge, and then deviate to the south again to leave Sherburn to the north;

- From just east of Sherburn to Potter Brompton the new road follows roughly the route of the existing road. At Potter Brompton it deviates south again to leave Ganton to the north;
- From Ganton the new road turns north-north-east, crosses the existing road at Binnington and then runs directly along the south-east side of the railway to the end of the scheme at the Seamer bypass, cutting the corner and leaving Staxton to the south.

Vertical alignment (the design of cuttings and embankments in relation to the surrounding ground level) has not yet been established.

15.8.2 Scheme Description of Section 2 Off Line Route

- The new road is likely to deviate north of the existing Malton bypass just to the west of the existing end of the bypass at Brambling Fields;
- The new road will pass between Beck House and Scagglethorpe Grange before aligning itself along the south side of the railway line and following this route all the way to Seamer Carr;
- Small deviations to the south (away from the railway line) will be made to avoid the effluent works north-east of Scampston and the electricity generating station north of East Knapton.

Vertical alignment (the design of cuttings and embankments in relation to the surrounding ground level) has not yet been established.

15.9 Identification of Impacts of Section 2 On Line and Off Line Routes

Construction Impacts

Likely impacts on driver views during the construction phase of the scheme are as follows:

- Improved views caused by temporary removal of roadside vegetation for road widening works;
- Interrupted views caused by plant, machinery, earthworks, temporary storage of material, traffic management measures and other construction activities.

Operational Impacts

Likely impacts on driver views during the operational phase of the scheme (that is, after construction is complete) are as follows:

- Improved views in some places, and reduced views in others, caused by changes to the vertical alignment of the road (where the new road is placed on embankments or in cuttings);
- Slightly different views available from places where the horizontal alignment of the road is altered;
- Reduced views caused by planting designed to reduce the visual and landscape impact of the new road.

15.9.1 Possible Mitigation Measures of Section 2 On Line and Off Line Routes

Mitigation in respect of impacts on driver views is usually addressed during the detailed design of a new road scheme. It is also important that mitigation in respect of other environmental impacts does not unduly increase the impact on driver view. For example, screen planting alongside the road, designed to reduce the visual impact of the road, should be

designed so as to allow at least intermittent views of the surrounding countryside; the same applies in respect of planting in response to landscape character impacts. These issues should be addressed by means of discussion of mitigation measures at multi-disciplinary mitigation workshops.

15.10 Impact Assessment of Section 2 On Line and Off Line Routes

This section of the report assesses the specific impacts of this scheme upon the travellers passing along it during and after construction.

Construction Impacts

No detailed design or construction method statements have yet been developed. Therefore it is impossible at this stage to predict what construction impacts will be. It is likely, however, that they will include those impacts referred above.

15.10.1 Impact Assessment: Operational Impacts of Section 2 On Line Route

The vertical and horizontal alignments of the new road, and the proposed mitigation in respect of other environmental impacts, have not yet been developed. Therefore it is impossible at this stage to predict what specific impacts will be caused on travellers' views after construction is complete. However, some general observations can be made:

No major deviations out of the existing route corridor are proposed. Generally, therefore, views will be over the same areas as those from the existing road. Where deviations are proposed, they run through landscape similar to that through which the existing road runs. However, the fact that the existing road runs along the lower slopes of the Yorkshire Wolds means that most deviations to the north will move the road into lower ground, and vice versa. No major earthworks or structures are envisaged, although relatively low embankments and shallow cuttings will be required in some places. Changes in the vertical alignment will cause some impacts on the extent of the views from the main line, but adverse impacts (mainly where the road deviates to the south and shallow cuttings may be required) will be balanced by beneficial impacts (mainly where the road deviates to the north and low embankments may be required).

It is likely that more grade-separated junctions would be provided for side roads. Improved views would therefore be available for travellers on side roads while on the elevated sections, but this would be a very minor impact and would not affect through-travellers.

Most of the settlements on this stretch of road are visually relatively uninteresting. Moving the road out of these settlements (at Rillington Fields, Rillington, West Heselton, East Heselton, Sherburn and Staxton) will provide better views over open countryside.

Overall, it is assessed that there is likely to be a very slight beneficial impact on travellers' views due to construction of the scheme.

15.10.2 Impact Assessment: Operational Impacts of Section 2 Off Line Route

The vertical and horizontal alignments of the new road, and the proposed mitigation in respect of other environmental impacts, have not yet been developed. Therefore it is impossible at this stage to predict what specific impacts will be caused on travellers' views after construction is complete. However, some general observations can be made:

The entire scheme proposal runs through a different route corridor compared with the existing route. The existing road passes over the lowest slopes of the Yorkshire Wolds and is therefore very slightly elevated in relation to the Vale of Pickering. The new route runs through the

Vale itself, close to the railway line, and consequently will have lower and less extensive views over the landscape. Views towards the Wolds will be more distant. No major earthworks or structures are envisaged.

It is likely that more grade-separated junctions would be provided for side roads, especially in view of the proximity of the railway line. Improved views would therefore be available for travellers on side roads while on the elevated sections, but this would be a very minor impact and would not affect through-travellers except by briefly interrupting their views. Most of the settlements on this stretch of road are visually relatively uninteresting. Moving the road out of these settlements (at Rillington Fields, Rillington, West Heslerton, East Heslerton, Sherburn and Staxton) will provide better views over open countryside.

Overall, it is assessed that there is likely to be a neutral impact on travellers' views due to construction of the scheme.

15.11 Summary of Section 2 On Line and Off Line Routes

15.11.1 Summary of Section 2 On Line Route

The scheme requires some changes to the horizontal alignment of the road, including moving the road away from some settlements and into more open countryside. Changes to the vertical alignment are likely to be small although they are not yet finalised. For these reasons there is likely to be a very slight beneficial impact on travellers' views, although the design of measures in mitigation of other environmental impacts should take into consideration impacts on views from the road.

15.11.2 Summary of Section 2 Off Line Route

Moving the road off-line to the north by over a kilometre on average will make significant changes to the views available from the road. Views will be improved by removing the road from the settlements, but worsened slightly by proximity to the railway line and its lower setting in the landscape. For these reasons there is likely to be a neutral impact on travellers' views, although the design of measures in mitigation of other environmental impacts should take into consideration impacts on views from the road.

15.11.3 Limitations and Assumptions of Section 2 On Line and Off Line Routes

At this stage, Stage 1, the assessment is of the overall route corridor. No preferred route alignment has been selected, no junctions designed, no detailed engineering designs made, and no vertical alignments completed. Furthermore, no mitigation in respect of other environmental impacts has been finalised. Therefore only the most sketchy assessment of impacts on travellers' views can be made.

15.11.4 Potential Further Mitigation of Section 2 On Line and Off Line Routes

No further mitigation is proposed in respect of impacts on travellers' views.

16 DRIVER STRESS

16.1 Introduction

This chapter reports on part of the assessment of potential impacts of the schemes on vehicle travellers using the A64 between York (at A1237 Hopgrove junction) and Malton (at B1248 Musley Bank Junction). The two parts of the assessment look at impacts on the view from the road, and impacts on driver stress.

Views from the Road

The existence of a new road, or upgrading to an existing road, may enable more road users to see the landscape than hitherto. Conversely, disbenefits may arise where a road passes through heavily industrialised or other visually unattractive areas, or where existing views are reduced where a road passes through new cuttings, tunnels or vegetation. This assessment is reported in Chapter 15.

Driver Stress

Driver Stress is defined as the adverse mental and physiological effects experienced by a driver traversing a road network. Factors involved include road layout and geometry, surface riding characteristics, junction frequency and speed and flow per lane. Taken together, these factors can induce in drivers feelings of discomfort, annoyance, frustration or fear culminating in physical and emotional tension that detracts from the value and safety of a journey. This assessment is reported in this chapter.

16.2 Assessment Techniques and Methodology

16.2.1 Guidelines

This assessment has been carried out in accordance with the Highways Agency's *Design Manual for Roads and Bridges, Volume 11 Section 3 Part 9, "Vehicle Travellers"* (DMRB). DMRB advises that increased driver stress is associated with reduced driving standards, more aggressive behaviour and increased risk-taking.

16.2.2 References

A number of studies of upgrading schemes for the A64 have been carried out. However, most have referred to economics, road safety and engineering aspects. For the Driver Stress assessment, the Scheme Assessment Reports for the Rillington Bypass and the York to Malton Improvements, produced in 2000 by W S Atkins, appear to be the only relevant documents.

16.2.3 Methodology:

Baseline Survey

The baseline survey consisted of a desktop study in October and November 2004, and a car-borne route survey on 11th November 2004. In the course of the survey all relevant side roads were considered, and the route was driven in both directions.

Definition of Scales of Impact

DMRB requires that at Stage 1 driver stress should be assessed for the existing route network, and a forecast made of whether the broadly defined routes proposed by the scheme would be

likely to produce low or moderate driver stress. Guidance on the assessment of stress levels is given in the following tables:

Average peak hourly flow per lane, in flow units per hour	Average Journey Speed Km/hr		
	Under 60	60-80	Over 80
Under 1200	High	Moderate	Low
1200-1600	High	Moderate	Moderate
Over 1600	High	High	High

Table 1: Stress on dual carriageway roads

Average peak hourly flow per lane, in flow units per hour	Average Journey Speed Km/hr		
	Under 50	50-70	Over 70
Under 600	High	Moderate	Low
600-800	High	Moderate	Moderate
Over 800	High	High	High

Table 2: Stress on single carriageway roads

Development of Possible Mitigation Measures

Mitigation measures are those which are included in the design to reduce adverse environmental impacts or to enhance beneficial environmental impacts of the scheme. At Stage 1, before detailed route options have been considered or engineering designs developed, mitigation measures are described only in general terms. At later stages detailed mitigation, specific to the scheme in question, will be designed and described. Part of the process of mitigation design should be to ensure that mitigation for one environmental impact does not adversely affect another environmental factor. For example, mitigation to reduce the visual impact of a scheme by screen planting may adversely affect driver stress by inhibiting views over the surrounding countryside.

DMRB suggests that new or improved routes, designed in accordance with current standards, should normally result in “moderate” or “low” levels of driver stress.

Assessment of Impacts

Impacts are assessed by means of a comparison between the existing situation and the likely or possible situation in the event that the scheme is built. At this stage a descriptive approach is used, because too little information is available about the final design of the road.

Limitations to Surveys or Assessments

At this stage, Stage 1, the assessment is of the overall route corridor. No preferred route alignment has been selected, no junctions designed, no detailed engineering designs made, and no vertical alignments completed. Furthermore, no mitigation in respect of other environmental impacts has been finalised. Therefore only a preliminary assessment of impacts on driver stress has been made. A very broad-scale description of both the existing

and the likely post-scheme situation is employed, and no attempt is made to describe the situation in any detail.

Assumptions in the Assessment

None.

The Legislative Framework

No legislation is directly relevant to the assessment of driver stress.

16.3 The Base Line Conditions of Section 1 York to Malton

Between York and Malton the existing route consists mainly of single carriageway two lane road, one lane in each direction. Some sections of dual carriageway are also present. Average peak hourly flow per lane, in flow units per hour, is 1083. This equates to “low” to “moderate” stress levels on the dual carriageway sections, depending on traffic speed, and “high” stress levels on the single carriageway sections. Journey time surveys have not been carried out, but experience suggests that speeds are generally low for a trunk road.

Frustration

Frustration is caused by a driver’s inability to drive at a speed inconsistent with his or her own wishes in relation to the general standard of the road. Congestion is a common factor leading to drivers feeling that they are not in control of their journey.

The survey showed that there are relatively few safe overtaking places on the A64 between York and Malton, even in the straight sections, except on the dual carriageways. The large number of LGVs tend to slow the traffic flow. It was found to be usual on the A64 that traffic speed is constrained by the general traffic flow.

Fear

Fear is caused by the presence of other vehicles, inadequate sight distances and the likelihood of pedestrians, especially children, stepping into the road. Fear is highest when speeds, flows and the proportion of heavy vehicles are all high.

The survey showed that traffic is very heavy on the A64. This becomes a particular problem for right-turning traffic, where vehicles may have to wait for long periods for a break in the traffic on the opposing flow. In some cases stabling lanes are not available, and vehicles may be waiting close to fast-moving traffic, or holding up the flow of traffic

Route uncertainty

Route uncertainty is caused primarily by inadequate signing.

Although some of the signs on the A64 are old, signing is adequate. The route network is not complex, being essentially a spine with side roads to adjacent settlements.

16.4 Scheme Description of Section 1 York to Malton

The purpose of a Stage 1 Assessment is to analyse the overall proposed route corridor, and no detailed designs have yet been developed. However, the scheme would ultimately result in a dual carriageway road from York to Malton on a similar alignment to the existing. It is likely that both horizontal and vertical curves will be eased, where appropriate, junctions will be grade separated and signage will be replaced and updated.

16.4.1 Identification of Impacts of Section 1 York to Malton

Construction Impacts

Likely impacts on driver stress during the construction phase of the scheme will be caused mainly by the requirement to pass extensive lengths of roadworks where the on-line widening to dual carriageway is carried out. The widening will not all be on one side of the existing

road, and consequently drivers will be required to change lanes, moving across from one side of the road works to another. Other adverse impacts will be caused by:

- Damage to and disruption of signage;
- Temporary road closures and traffic management measures;
- Dust, mud and litter on the road;
- Increased congestion;
- Movement of plant and machinery on the main road;
- Damage to the existing road surface
- Disruption of vehicle movements on the network of local roads.

Operational Impacts

Likely impacts on driver views during the operational phase of the scheme (that is, after construction is complete) are as follows:

Much reduced stress due to the factors itemised under “Scheme Description” above;
Slightly increased stress due to increased speed on the new road.

16.5 Possible Mitigation Measures of Section 1 York to Malton

Mitigation is not generally addressed in respect of driver stress, since modern design standards should ensure that stress is reduced compared with the existing situation.

16.5.1 Impact Assessment of Section 1 York to Malton

This section of the report assesses the specific impacts of this scheme upon the travellers passing along it during and after construction.

Construction Impacts

Impacts identified under “Identification of Impacts” above will cause increased stress for drivers over an extended period. Overall, the impact is assessed to be large adverse.

Operational Impacts

The overall impact of the scheme on driver stress in the operational phase will be beneficial. It is expected that driver stress will decline from “high” or “moderate” in places to “low” throughout.

16.6 Summary of Section 1 York to Malton

Construction of the road will have adverse impacts on driver stress during the construction phase of the scheme. Benefits will be immediate after construction is complete.

16.6.1 Limitations and Assumptions

At this stage, Stage 1, the assessment is of the overall route corridor. No preferred route alignment has been selected, no junctions designed, no detailed engineering designs made, and no vertical alignments completed. Furthermore, no mitigation in respect of other environmental impacts has been finalised. Therefore only a preliminary assessment of impacts on driver stress has been made.

16.6.2 Potential Further Mitigation

No further mitigation is proposed in respect of impacts on driver stress.

16.7 The Base Line Conditions of Section 2 On Line Route

Between Malton and Seamer the entire existing route consists of single carriageway two lane road, one lane in each direction. Average peak hourly flow per lane, in flow units per hour, is 754. This equates to “moderate” to “high” stress levels according to Table 2 above, depending on average traffic speeds. Journey time surveys have not been carried out, but experience suggests that speeds are generally low for a trunk road and this would suggest higher stress levels.

Frustration

Frustration is caused by a driver’s inability to drive at a speed inconsistent with his or her own wishes in relation to the general standard of the road. Congestion is a common factor leading to drivers feeling that they are not in control of their journey.

The survey showed that there are relatively few safe overtaking places on the A64 between Malton and Seamer, even in the straight sections. The large number of LGVs tend to slow the traffic flow. It was found to be usual on the A64 that traffic speed is constrained by the general traffic flow.

Fear

Fear is caused by the presence of other vehicles, inadequate sight distances and the likelihood of pedestrians, especially children, stepping into the road. Fear is highest when speeds, flows and the proportion of heavy vehicles are all high.

The survey showed that traffic is very heavy on the A64. This becomes a particular problem for right-turning traffic, where vehicles may have to wait for long periods for a break in the traffic on the opposing flow. In some cases stabling lanes are not available, and vehicles may be waiting close to fast-moving traffic, or holding up the flow of traffic

Route uncertainty

Route uncertainty is caused primarily by inadequate signing.

Although some of the signs on the A64 are old, signing is adequate. The route network is not complex, being essentially a spine with side roads to adjacent settlements.

16.8 Scheme Description of Section 2 On Line Route

The purpose of a Stage 1 Assessment is to analyse the overall proposed route corridor, and no detailed designs have yet been developed. However, the scheme would ultimately result in a dual carriageway road from Malton to York on a similar general alignment to the existing, although most settlements would be bypassed. It is likely that both horizontal and vertical curves will be eased, where appropriate, junctions will be grade separated and signage will be replaced and updated.

16.8.1 Identification of Impacts of Section 2 On Line Route

Construction Impacts

Likely impacts on driver stress during the construction phase of the scheme will be caused mainly by the requirement to pass extensive lengths of roadworks where the on-line widening

to dual carriageway is carried out. The widening will not all be on one side of the existing road, and consequently drivers will be required to change lanes, moving across from one side of the road works to another. Other adverse impacts will be caused by:

- Damage to and disruption of signage;
- Temporary road closures and traffic management measures;
- Dust, mud and litter on the road;
- Increased congestion;
- Movement of plant and machinery on the main road;
- Damage to the existing road surface
- Disruption of vehicle movements on the network of local roads.

Operational Impacts

Likely impacts on driver stress during the operational phase of the scheme (that is, after construction is complete) are as follows:

Much reduced stress due to the factors itemised under “Scheme Description” above;
Slightly increased stress due to increased speed on the new road.

16.9 Possible Mitigation Measures of Section 2 On Line Route

Mitigation is not generally addressed in respect of driver stress, since modern design standards should ensure that stress is reduced compared with the existing situation.

16.9.1 Impact Assessment of Section 2 On Line Route

This section of the report assesses the specific impacts of this scheme upon the travellers passing along it during and after construction.

Construction Impacts

Impacts identified under “Identification of Impacts” above will cause increased stress for drivers over an extended period. Overall, the impact is assessed to be large adverse.

Operational Impacts

The overall impact of the scheme on driver stress in the operational phase will be beneficial. It is expected that driver stress will decline from “high” or “moderate” to “low”.

16.10 Summary of Section 2 On Line Route

Construction of the road will have adverse impacts on driver stress during the construction phase of the scheme. Benefits will be immediate after construction is complete.

16.10.1 Limitations and Assumptions

At this stage, Stage 1, the assessment is of the overall route corridor. No preferred route alignment has been selected, no junctions designed, no detailed engineering designs made, and no vertical alignments completed. Furthermore, no mitigation in respect of other environmental impacts has been finalised. Therefore only a preliminary assessment of impacts on driver stress has been made.

16.10.2 Potential Further Mitigation

No further mitigation is proposed in respect of impacts on driver stress.

16.11 The Base Line Conditions of Section 2 Off Line Route

Between Malton and Seamer the entire existing route consists of single carriageway two lane road, one lane in each direction. Average peak hourly flow per lane, in flow units per hour, is 754. This equates to “moderate” to “high” stress levels according to Table 2 above, depending on average traffic speeds. Journey time surveys have not been carried out, but experience suggests that speeds are generally low for a trunk road and this would suggest higher stress levels.

Frustration

Frustration is caused by a driver’s inability to drive at a speed inconsistent with his or her own wishes in relation to the general standard of the road. Congestion is a common factor leading to drivers feeling that they are not in control of their journey.

The survey showed that there are relatively few safe overtaking places on the A64 between Malton and Seamer, even in the straight sections. The large number of LGVs tend to slow the traffic flow. It was found to be usual on the A64 that traffic speed is constrained by the general traffic flow.

Fear

Fear is caused by the presence of other vehicles, inadequate sight distances and the likelihood of pedestrians, especially children, stepping into the road. Fear is highest when speeds, flows and the proportion of heavy vehicles are all high.

The survey showed that traffic is very heavy on the A64. This becomes a particular problem for right-turning traffic, where vehicles may have to wait for long periods for a break in the traffic on the opposing flow. In some cases stabling lanes are not available, and vehicles may be waiting close to fast-moving traffic, or holding up the flow of traffic

Route uncertainty

Route uncertainty is caused primarily by inadequate signing.

Although some of the signs on the A64 are old, signing is adequate. The route network is not complex, being essentially a spine with side roads to adjacent settlements.

16.12 Scheme Description of Section 2 Off Line Route

The purpose of a Stage 1 Assessment is to analyse the overall proposed route corridor, and no detailed designs have yet been developed. However, it is known that the proposed off-line route from Malton to Seamer would consist of a new dual carriageway constructed to modern standards, with an almost straight alignment, few if any gradients, grade-separated junctions and new signage.

16.12.1 Identification of Impacts of Section 2 Off Line Route

Construction Impacts

Impacts on driver stress during the construction phase of the scheme are likely to be limited to some uncertainty, minor fear and confusion during the tie-in phase at either end of the scheme.

The remainder of the scheme is so far off-line to the north that it will not impinge on the existing A64 at all. There may be some minor adverse impacts on travellers on minor roads that cross the new alignment, but these impacts are likely to be negligible.

Operational Impacts

Likely impacts on driver stress during the operational phase of the scheme (that is, after construction is complete) are as follows:

Much reduced stress due to the factors itemised under “Scheme Description” above;
Slightly increased stress caused by boredom driving along the flat, straight section of road.
However, this impact is likely to be negligible in magnitude;
Slightly increased stress due to increased speed on the new road.

16.13 Possible Mitigation Measures of Section 2 Off Line Route

Mitigation is not generally addressed in respect of driver stress, since modern design standards should ensure that stress is reduced compared with the existing situation.

16.13.1 Impact Assessment of Section 2 Off Line Route

This section of the report assesses the specific impacts of this scheme upon the travellers passing along it during and after construction.

Construction Impacts

Impacts identified under “Identification of Impacts” above will be adverse, but negligible in magnitude. Therefore the overall impact is assessed to be neutral.

Operational Impacts

The overall impact of the scheme on driver stress in the operational phase will be beneficial. It is expected that driver stress will decline from “high” or “moderate” to “low”.

16.14 Summary of Section 2 Off Line Route

Construction of the road will have negligible adverse impacts on driver stress during the construction phase of the scheme. Benefits will be immediate after construction is complete.

16.14.1 Limitations and Assumptions

At this stage, Stage 1, the assessment is of the overall route corridor. No preferred route alignment has been selected, no junctions designed, no detailed engineering designs made, and no vertical alignments completed. Furthermore, no mitigation in respect of other environmental impacts has been finalised. Therefore only a preliminary assessment of impacts on driver stress has been made.

16.14.2 Potential Further Mitigation

No further mitigation is proposed in respect of impacts on driver stress.

17 WATER QUALITY AND DRAINAGE

17.1 Introduction

The following section of the assessment describes the water quality and drainage within the study area, with particular reference to the route corridors identified. In addition, any designated sites of fluvial, wetland or conservation significance are identified, with potential impacts discussed.

This section aims to identify:

- Key features of the water environment;
- Impacts that the proposed schemes may have on water quality and fisheries;
- Proposed mitigation measures to negate or moderate the impacts of the scheme

17.2 Assessment Techniques and Methodology

17.2.1 Guidelines

The methodology adopted for this assessment is in accordance with the *Design Manual for Roads and Bridges, (DMRB) Volume 11* (Section 3; Part 10) Water Quality and Drainage. The scope of mitigation proposed for the scheme takes into account the methodology outlined in the DMRB and acceptable best practice and guidance provided by the Environment Agency.

17.2.2 References

- Construction Industry Research and Information Association (1994) Control of pollution from highway drainage discharges. CIRIA Report 142. CIRIA, Westminster, London.
- Department for Transport (2004) Transport Analysis Guidance [online] Department for Transport, UK. Available from: <http://www.webtag.org.uk> [last accessed 18/8/2004]
- Environment Agency (2004) What's in my Back Yard? [online] Environment Agency, UK. Available from: <http://www.environment-agency.gov.uk/yourenv> [last accessed 5/11/2004]
- British Geological Survey, GeoIndex: <http://www.bgs.ac.uk>

17.2.3 Methodology

Baseline Survey

All information for this assessment has been gathered through a desk-based study carried out during October 2004.

Information was also received from the Environment Agency Ref: DN/2004/002816-1/1 & DN/2004/002816-2/1 which was used in the compilation of this assessment.

Definition of Scales of Impact

As no scale of impact is provided within the relevant section of the DMRB, the following methodology for assessment has been obtained from the Department for Transport website of Transport Analysis Guidance, 'WebTAG'. This methodology assesses both the importance of

an environmental attribute, as well as the magnitude of the identified impact, and utilises a predefined matrix to provide an estimate of the significance of the potential impacts.

Quality - provides a measure of the physical condition of the attribute.

Scale - the geographical scale at which the attribute matters to both policy makers and stakeholders, at all levels.

Rarity - whether the water attribute being evaluated is commonplace or scarce, at the scale at which it matters.

Substitutability - whether water attributes are replaceable over a given time frame.

These indicators are developed within the following table and provide a means of assessing the importance of each environmental attribute.

Importance	Criteria	Examples
Very High	attribute with a high quality and rarity, regional or national scale and limited potential for substitution	Aquifer providing potable water to a large population EC designated Salmonid fishery
High	attribute with a high quality and rarity, local scale and limited potential for substitution attribute with a medium quality and rarity, regional or national scale and limited potential for substitution	GQA Grade A reach of river aquifer providing potable water to a small population EC designated Cyprinid fishery
Medium	Attribute with a medium quality and rarity, local scale and limited potential for substitution attribute with a low quality and rarity, regional or national scale and limited potential for substitution	GQA Grade B / C reach or river Aquifer providing abstraction water for agricultural or industrial use
Low	attribute with a low quality and rarity, local scale and limited potential for substitution	Floodplain with limited existing development

Table.1 - Guidance for Estimating the Importance of Environmental Attributes

Following identification of potential impacts for the proposed route, an assessment is then made to determine the impact's magnitude including the effects of agreed mitigation. The following table is used to determine this magnitude.

Magnitude	Criteria	Example
Major	Results in loss of attribute	loss of EC designated Salmonoid fishery change in GQA grade of river reach compromise employment source loss of flood storage/increased flood risk pollution of potable source of abstraction
Moderate	Results in impact on integrity of attribute or loss of part of attribute	loss in productivity of a fishery contribution of a significant proportion of the effluent in the receiving river, but insufficient to change its GQA grade reduction in the economic value of the feature
Minor	Results in minor impact on attribute	measurable changes in attribute, but of limited size and/or proportion
Negligible	Results in an impact on attribute but of insufficient magnitude to affect the use/integrity	discharges to watercourse but no significant loss in quality, fishery productivity or biodiversity, no significant impact on the economic value of the feature or no increase in flood risk

The significance of the impact is determined by combining the importance of the attribute, with the magnitude of the impact, using the matrix table given in following table.

Magnitude of potential impact	Importance of attribute			
	Very High	High	Medium	Low
Major	Very Significant	Highly Significant	Significant	Low Significance
Moderate	Highly Significant	Significant	Low Significance	Insignificant
Minor	Significant	Low Significance	Insignificant	Insignificant
Negligible	Low Significance	Insignificant	Insignificant	Insignificant

Table.2 Criteria for Estimating the Significance of Potential Impacts

17.2.4 Development of Possible Mitigation Measures

Mitigation measures are suggested to avoid potential impacts and provide control systems in accordance with *DMRB, Volume 11, Section 3, Part 10*. The measures proposed are only appropriate at the level of detail of the design and data collection carried out under the requirements for this scheme.

17.2.5 Assessment of Impacts

Impacts have been assessed in accordance with *DMRB Volume 11, Section 3*, which provides for quantitative assessment of the pollutant potential of the carriageway. These include spillage risk calculations based on the traffic flow data and preliminary assessment of flood plain impact.

Qualitative assessment of potential impacts on local fisheries have also been undertaken, with evaluation made in accordance with the scales of impact highlighted previously.

17.2.6 Limitations to Surveys or Assessments

Collection of baseline data has been restricted to desk top studies, limiting the information available upon which to base assessments.

It should be noted that spillage calculations are in part inconclusive due to limitations in the data available. Junction locations, have been to a certain extent assumed and may be subject to change. Assessments have been made on proposals which are at an early stage of development; hence there is limited information available regarding cuttings and embankments, construction activities and existing or proposed drainage systems.

The potential future requirements of the EU Water Framework Directive have not been considered as part of this assessment.

Without detailed proposals and field data it is not possible to put forward detailed mitigation proposals however, the mitigation measures which have been suggested are thought to be appropriate given the information available.

Within the assessment period it has not been possible to agree the mitigation proposals with the Highways Agency, therefore these measures may be subject to modification and development.

17.2.7 Assumptions in the Assessment

It was necessary to assume that all existing and proposed carriageway; drains to a single point for calculation of the spillage risks presented by the scheme options.

All receiving watercourses are assumed to have sufficient capacity without requirement for alterations to downstream channel profile.

All mitigation proposals are assumed to be technically feasible, and to include provision for maintenance access.

All tributaries of main rivers are assumed to have a water quality objective value equal to that of the main river, where no alternative information has been provided.

Salmon populations are assumed to be migratory or resident within the designated stretches of the river and becks, as well as within their tributaries.

17.3 The Base Line Conditions of Section 1

17.3.1 The Base Line Conditions Section 1 from York Bypass (at A1237 Hopgrove junction) to Malton Bypass (at B1248 Musley Bank Junction)

The length of the A64 covered in this study crosses three recognised water systems: Foss Beck, Spittle Beck and Cram Beck. In some areas, the route passes very close to the River Derwent. The River Derwent is designated a Site of Special Scientific Interest (SSSI) due its spawning populations of river lamprey, in addition to other supporting species of interest. The site is also designated a candidate Special Area of Conservation (cSAC).

Environment Agency data records the River Derwent and some of the tributaries in the area as River Quality Objective (RQO) Grade 1 or 2, with generally very good or good chemical properties.

Indicative flood plain information is illustrated in Figures 9053/s17/ a – c.

The study area is not within any groundwater protection zone. The underlying bedrock is designated intermittently as either non-aquifer or minor aquifer. There are no licensed landfill sites within the study area.

Two tributaries of the River Derwent, Spital Beck and Cram Beck, are EU designated salmonoid fisheries. These, and their tributaries, cross the existing A64 route northwest to southeast. Yorkshire and District Amalgamation of Anglers control fishing rights for the River Derwent, and some of its tributaries and nearby ponds are also utilised for fishing purposes by the group.

17.3.2 The Legislative Framework Section 1 from York Bypass (at A1237 Hopgrove junction) to Malton Bypass (at B1248 Musley Bank Junction)

The principal legislation on water quality and discharges under which this assessment has been prepared are:

- Highways Act (1980);
- Water Resources Act (1991);
- The Groundwater Regulations (1998).

Whilst general guidance on the EU Water Framework Directive (WFD) is still being developed by UK Technical Advisory Group (UKTAG), this legislation is not incorporated within this assessment.

17.4 Scheme Description of Section 1

Section 1 from York Bypass (at A1237 Hopgrove junction) to Malton Bypass (at B1248 Musley Bank Junction)

This scheme will involve the crossing of two tributaries of the River Derwent; Spittal Beck and Cram Beck. Foss Beck which flows into the River Foss is also crossed at the start of the scheme just north of Hopgrove roundabout. In addition there are a number of water abstraction sites located along the route, locations of which are illustrated in Figures 9053/s17/ a – c.

There are consents obtained from the Environment Agency for water discharge permits see appendix 17

17.5 Identification of Impacts of Section 1

17.5.1 Section 1 from York Bypass (at A1237 Hopgrove junction) to Malton Bypass (at B1248 Musley Bank Junction)

Construction Impacts

Drainage and Flooding

The existing vegetated areas which will form part of the scheme currently provide interception, transpiration and attenuation of rainfall within the catchment area of each watercourse. The removal of topsoil during the site strip will reduce the effective vegetated area, and in doing so may alter the run-off characteristics and flow volume into local watercourses. The impacts may include concentrated, and therefore increased peak flows, which in turn may induce flooding or scouring of the existing receiving waters.

Water Quality

Soil stripping, compound preparation, soil storage heaps and creation of embankments and cuttings may all contribute to increased sediment loading within receiving waters. This impact would be particularly significant prior to the compaction of these areas.

Sediments from topsoil are likely to comprise a proportion of organic particulate, which if eroded into a watercourse, would increase oxygen demand, potentially reducing downstream oxygen levels. Increased concentrations of suspended sediments can also settle downstream of outfalls, in areas of slower flow, resulting in a reduction of the flow of oxygen into the aerobic layer of the river bed.

Accidental spillages of site substances from plant and equipment, may also impact on the quality of all receiving waters, as well as the rivers into which they outfall.

Fisheries

Construction activities may result in increased levels of suspended sediments and the potential for spillages of hydrocarbons and other contaminants from plant and equipment. This could have a significant impact on aquatic ecosystems, including fisheries, and the introduction of these pollutants into the watercourses has the potential for serious degradation in water quality. Furthermore, disturbance to the river flow during the construction of structures, may impact upon salmonid migration and populations within each of the highlighted watercourses.

Groundwater

The local strata briefly consists of post glacial fluvial sand overlying intermittent boulder clay, glaciolacustrine deposits and sandstone bedrock, with groundwater classified as minor or non-aquifer.

A potential impact exists from accidental spillage of site substances at any location along the project. Infiltration of polluting substances through ground into the local aquifer may generate a long-term impact upon the quality of the groundwater.

There is a groundwater protection zone south east of Malton. As the Malton stretch of the A64 is already dualled further impact will not occur.

Operational Impacts

Drainage and Flooding

The increase in impermeable carriageway surface area may alter the flow volume and characteristics within the receiving waters. Impacts may be generated from increased or extended peak flows, as well as changes to the existing streamlines within the watercourse. The impacts of these changes may include flooding effects due to the greater discharge and the possible throttle effect of in-river structures at each crossing location. Impacts on the river bed downstream of drainage may also be experienced due to enhanced scouring effects from increased flow, as well as possible disruption of the streamlines within the receiving waters at the outfall locations.

Construction of earthworks within the floodplain could impact upon the containment and distribution of waters during times of flooding.

Water Quality

Operational sources of contaminants include surface water runoff as well as major spills that occur during accidents. These sources result in a wide range of potential contaminants, including:

- Vehicle oil and other hydrocarbons
- Suspended sediments
- Metals
- Organic compounds – e.g., pesticides and herbicides
- Salt and other de-icing agents
- Nutrients

The potential impact on the receiving waters from accidental and prescribed discharges is the degradation of water quality within the receiving waters. These impacts may reduce the diversity of sensitive downstream aquatic ecosystems.

Fisheries

Potential impacts during the operational phase of the scheme include:

- effects on migratory fish due to changes in river flow patterns following construction of structures within the channels;
- potential impact on fish populations due to accidental spillages;
- potential impact on fish populations due to localised pollution effects due to increased surface water run-off;

Groundwater

The local strata briefly consists of post glacial fluvial sand overlying intermittent boulder clay, glaciolacustrine deposits and sandstone bedrock, with groundwater classified as minor or non-aquifer.

A potential impact exists from released contaminants draining from the carriageway, into the highway drainage system. The contaminants may then infiltrate into the aquifer beneath the site generating a long-term impact on water quality.

An impact on the groundwater may also be experienced in areas of cut, where the groundwater level may be artificially depressed due to carriageway and pre-earthworks drainage. Associated impacts may include changes to local hydrogeology, reduction in local abstraction borehole levels and changes to local surface ecosystems.

The Corallian Limestone aquifer outcrop is vulnerable. This aquifer provides the only public water supply for the Scarborough area.

17.6 Possible Mitigation Measures of Section 1

17.6.1 Section 1 from York Bypass (at A1237 Hopgrove junction) to Malton Bypass (at B1248 Musley Bank Junction)

Construction Impacts

The following mitigation measures could be implemented during construction to reduce impacts upon the hydrological environment:

- Use of containment measures for instance the drainage/interceptor pools where the drainage water can be controlled and monitored before releasing into the environment.
- Avoid construction works in river, avoid disturbance of river during sensitive fisheries times (migration and spawning periods) at all crossing points
- Prepare Environmental Management Plan prior to Construction
- Ensure early construction of lagoons/ balancing ponds prior to construction at all discharge locations
- Consult with Environment Agency, English Nature and Fisheries organisations prior to construction
- Carry out water quality surveys before and during construction
- Follow Environment Agency's Pollution Prevention Guidelines (PPG)
-

Actual mitigation measures should be determined following calculation of impacts upon water quality at each drainage location. Other areas of environmental impact should be considered through consultation to ensure mitigation measures for water quality do not cause adverse effects elsewhere (for example visual impact).

Operational Impacts

The following mitigation measures could be included within the scheme design to reduce impacts upon the hydrological environment:

-
- Use vegetative drainage and pollution control measures including balancing ponds, filtration ponds and reed beds where appropriate and feasible at each outfall location
- Provide interceptor system to carriageway drainage at each outfall location
- Use of filter drains within carriageway drainage system
- Provide vortex discharge control at each outfall location
- Provide penstock control at each outfall location
- Use manholes with sediment traps within carriageway drainage system
- Provide maintenance manual for drainage systems during operation
- Provide cut-off valves on surface water outlets on section of road prone to accidents

No existing or proposed drainage details were available at the time of this assessment. However, it is assumed that it does not include any vegetative treatment systems. The drainage systems could utilise a combination of techniques to reduce the polluting effect of carriageway run-off. Details of removal efficiency of each system are highlighted within the following table.

Actual mitigation measures should be determined following calculation of impacts upon water quality at each drainage location, at a later stage in the assessment process. Other areas of environmental impact should be considered through consultation to ensure mitigation measures for water quality do not cause adverse effects elsewhere (for example visual impact).

Treatment System	Removal Efficiency (%)		
	Zinc (Total)	Copper (Dissolved)	Suspended Sediments
Engineered Systems			
Combined Filter Drains	70-80	10-30	80-90
Filtration Basin	70-80	10-30	60-90
Oil Separators	30-50	<10	30-80
Balancing Ponds - Dry	35-45	<10	30-60
- Wet	30-40	<10	40-70
Vegetative Systems			
Swales and Grassed Channels	70-90	50-70	60-90
Biofiltration techniques	50-80	50-80	50-80

Table 3: Treatment Systems Efficiency Table 2.2 Volume 11 (Section 3 Part 10) Design Manual for Roads and Bridges (DMRB) Water Quality and Drainage

17.7 Impact Assessment of Section 1

17.7.1 Section 1 from York Bypass (at A1237 Hopgrove junction) to Malton Bypass (at B1248 Musley Bank Junction)

Construction Impacts

Provides assessment of the potential construction impacts and includes the effects of the mitigation measures highlighted previously.

Impact	Potential Mitigation	Assessment		
		Importance	Magnitude	Significance
Drainage and Flooding				
Impact on beck flow characteristics due to in-river works may lead to flooding of local watercourses	Avoid construction works in river	Medium Lies within flood plain	Moderate Mitigation should reduce impact	Low significance Possible residual negative impact
Impact on beck flow characteristics due to in-river works, may lead to localised scouring of local watercourse beds	Avoid construction works in river	Low Lies within flood plain	Minor Mitigation should reduce impact	Insignificant Possible residual negative impact
Increase of river flow volume due to uncontrolled site run-off following topsoil strip, may lead to flooding of local watercourses.	Ensure early construction of lagoons/ balancing ponds prior to construction Prepare Environmental Management Plan (EMP) prior to construction Consult with Environment Agency prior to construction	Medium Lies within flood plain	Minor Mitigation should control impact	Insignificant Possible residual negative impact depending upon design
Water Quality				
Increased suspended sediment load within watercourses due to uncontrolled surface run-off	Ensure early construction of lagoons/ balancing ponds prior to construction Prepare Environmental Management Plan prior to construction Carry out water quality surveys before and during construction	High RQO 2, SSSI, cSAC tributary Salmanoid fishery	Minor Low probability with mitigation	Low significance Possible negative impact
Increased oxygen demanding material within watercourses due to uncontrolled run-off	Ensure early construction of lagoons/ balancing ponds prior to construction Prepare Environmental Management Plan prior to construction Carry out water quality surveys before and during construction	High RQO 2, SSSI, cSAC tributary Salmanoid fishery	Minor Low probability with mitigation Temporary reduction in Dissolved Oxygen Levels Possible moderate degree of aeration within stream	Low significance Possible negative impact

Impact	Potential Mitigation	Assessment		
		Importance	Magnitude	Significance
Possible eutrophication of local watercourses due to surface run-off of nitrogen and phosphorous compounds following topsoil strip of agricultural land	Ensure early construction of lagoons/ balancing ponds prior to construction Prepare Environmental Management Plan prior to construction Carry out water quality surveys before and during construction Consult with Environment Agency, English Nature and Fisheries Organisations prior to construction	High RQO 2, SSSI, cSAC tributary Salmanoid fishery	Minor Low probability due to limited increase in nitrate leaching and small area of land involved River system nitrate content currently moderate level Not within Nitrate Vulnerable Zone (NVZ)	Low Significance Possible slight negative impact
Pollution effect of accidental spillages of site substances (e.g. hydrocarbons etc) into local watercourses	Ensure early construction of lagoons/ balancing ponds prior to construction Prepare Environmental Management Plan prior to construction Follow Environment Agency's Pollution Prevention Guidelines (PPG)	High RQO 2, SSSI, cSAC tributary Salmanoid fishery	Minor Mitigation will significantly reduce probability May impact upon ecology – e.g. oils may reduce oxygen diffusion into watercourse	Low significance Possible negative impact
Fisheries				
Impact upon local salmanoid spawning areas and aquatic ecology due to settlement of suspended sediment load, mobilised by uncontrolled surface run-off	Use of Containment Measures Ensure early construction of lagoons/balancing ponds prior to construction Avoid disturbance of river during sensitive fisheries times (migration and spawning) Consult with Environment Agency, English Nature and Fisheries organisations prior to construction Existing drainage system could be used to control site perimeter	High RQO 2, SSSI, cSAC tributary Salmanoid fishery	Minor Possible Loss of salmanoid spawning area – due to siltation of river bed Potential oxygen demand within water phase Low probability with mitigation	Low significance Possible negative impact

Impact	Potential Mitigation	Assessment		
		Importance	Magnitude	Significance
Impact on salmonoid migration where flow controls are necessary to construct in-river works	Avoid construction works in river Avoid disturbance of river during sensitive times (migration and spawning)	High RQO 2, SSSI, cSAC tributary Salmanoid fishery	Negligible Mitigation should remove impact	Low Significance Potential negative impact
Groundwater				
Negative impact on groundwater due to infiltration of accidental site spillages	Use of containment measures Prepare Environmental Management Plan prior to construction Follow Environment Agency's Pollution Prevention Guidelines (PPG)	Low Minor aquifer	Negligible	Insignificant

Table 4: Constructional Impacts Section 1

Operational Impacts

The following table provides assessment of the potential operational impacts and includes the effects of the mitigation measures highlighted previously.

Impact	Potential Mitigation	Assessment		
		Importance	Magnitude	Significance
Drainage and Flooding				
Impact on river flow characteristics following construction of structures within channels, leading to flooding of local watercourses	Avoid construction works within river	High Lies within flood plain	Negligible Mitigation should remove impact	Insignificant Possible negative impact
Impact on river flow characteristics due to increased carriageway run-off, may lead to flooding of local watercourses	Provide vortex control and balancing ponds at each outfall if necessary	Low Lies within flood plain	Negligible Mitigation will control flow to level agreed with EA Minor impact may be experienced	Insignificant Residual negative impact
Water Quality				
Spillage Risk	Provide interceptor system to carriageway drainage Use of filter drains within carriageway drainage system Provide penstock control at each outfall Provide balancing ponds at each outfall	High RQO 2, SSSI, cSAC tributary Salmanoid fishery	Minor Unmitigated Risk 1:104 year Mitigated Risk 1:296 year	Low Significance Potential negative impact

Impact	Potential Mitigation	Assessment		
		Importance	Magnitude	Significance
Local Pollution Effect from carriageway run-off (Dissolved Copper and Total Zinc)	Use vegetative drainage and pollution control measures including filtration ponds and reed beds Use manholes with sediment traps Use of filter drains within carriageway drainage system Provide maintenance manual for drainage system during operation	High RQO 2, SSSI, cSAC tributary Salmanoid fishery	Negligible Assumed no decrease in run-off quality due to similar nature of traffic proposals Mitigation to remove significant proportion of Copper and Zinc if required	Low Significance Potential neutral/positive impact
Fisheries				
Impact on salmanoid migration due to changes in flow patterns following construction of structures within channels	Avoid construction of works within river	High SSSI/cSAC EC designated salmanoid fishery	Negligible Mitigation should remove impact	Insignificant Residual negative impact
Impact of accidental spillages within carriageway, on salmanoid populations	Provide interceptor system to carriageway drainage Use of filter drains within carriageway drainage system Provide penstock control at each outfall Provide balancing ponds at each outfall	High SSSI/cSAC EC designated salmanoid fishery	Minor Unmitigated Risk 1:104 year Mitigated Risk 1:296 year	Low significance Slight adverse impact
Local Pollution Effect from carriageway run-off (Dissolved Copper and Total Zinc) on salmanoid populations	Use vegetative drainage and pollution control measures including filtration ponds and reed beds Use manholes with sediment traps Use of filter drains within carriageway drainage system Provide maintenance manual for drainage system during operation	High SSSI/cSAC EC designated salmanoid fishery	Negligible See section 7.1 (Water Quality) Assumed no decrease in run-off quality Mitigation to remove significant proportion of Copper and Zinc if required	Insignificant Potential neutral/positive impact
Groundwater				

Impact	Potential Mitigation	Assessment		
		Importance	Magnitude	Significance
Infiltration of contaminants into aquifer from filter drains, following an accidental spillage within carriageway	Use impermeable liners within filter drains when constructing through porous material	Low Minor/non aquifer	Negligible Low Probability	Insignificant

Table 5: Operational Impacts Section 1

17.8 Summary of Section 1

17.8.1 Section 1 from York Bypass (at A1237 Hopgrove junction) to Malton Bypass (at B1248 Musley Bank Junction)

The main potential impacts on water quality and drainage have been identified to occur during the construction phase of the project, when flow control measures may be unable to contain increased flows from the sites. Assessment of the potential impacts is based on limited water quality information and may not offer a definitive appraisal of the overall magnitude of impacts. Further water quality analysis will be necessary at Stage II to define more reliable baseline conditions. In doing so, targeted mitigation could then be developed to address the negative impacts highlighted.

Limitations and Assumptions of Section 1 from York Bypass (at A1237 Hopgrove junction) to Malton Bypass (at B1248 Musley Bank Junction)

DMRB guidelines advise that all roads require a minimum 1:100 year return period for major spillages. It should be noted that there are limitations to this data (see below), hence risks should be re-assessed with more accurate data when available.

17.8.2 Potential Further Mitigation of Section 1 from York Bypass (at A1237 Hopgrove junction) to Malton Bypass (at B1248 Musley Bank Junction)

All receiving watercourses are assumed to have sufficient capacity without requirement for alterations to downstream channel profile;
All mitigation proposed is assumed to be technically feasible, and to include provision for maintenance access;
All tributaries of main rivers are assumed to have a water quality objective value equal to that of the main river;
Drainage information not available, hence spillage risk calculations assume proposed designs drain to existing drainage system;

17.9 The Base Line Conditions of Section 2

17.9.1 The Base Line Conditions Section 2 from Malton Bypass (at Brambling Fields) to Seamer Bypass (at Seamer Carr)

The length of the A64 covered in this study crosses several recognised water systems: Settrington Beck, The Cut, Clough Drain, Middle Fish Drain, High Fish Pond, Rillington Beck, Ass Beck, Sherburn Beck, West Beck, East Beck Windle Beck, Spittal Beck, Keld Beck, Blakey Beck. The route crosses the River Derwent east of Malton and the river Hertford west of Seamer. The River Derwent is designated a Site of Special Scientific Interest (SSSI) due its spawning populations of river lamprey, in addition to other supporting species of interest. The site is also designated a candidate Special Area of Conservation (cSAC).

Environment Agency data records the River Derwent and some of the tributaries in the area as River Quality Objective (RQO) Grade 1 or 2, with generally very good or good chemical properties.

Flood plain information is illustrated in Figure 9053/17/2/a-c.

The study area is not within any groundwater protection zone. The underlying bedrock is designated intermittently as either non-aquifer or minor aquifer. There are no licensed landfill sites within the study area.

Two tributaries of the River Derwent, Spital Beck and Settrington Beck, are EU designated salmonoid fisheries. These, and their tributaries, cross the existing A64 route northwest to southeast. Yorkshire and District Amalgamation of Anglers control fishing rights for the River Derwent, and some of its tributaries and nearby ponds are also utilised for fishing purposes by the group.

17.9.2 The Legislative Framework Section 2 from Malton Bypass (at Brambling Fields) to Seamer Bypass (at Seamer Carr)

The principal legislation on water quality and discharges under which this assessment has been prepared are:

- Highways Act (1980);
- Water Resources Act (1991);
- The Groundwater Regulations (1998).

Whilst general guidance on the EU Water Framework Directive (WFD) is still being developed by UK Technical Advisory Group (UKTAG), this legislation is not incorporated within this assessment.

17.10 Scheme Description of Section 2 On Line Route

17.10.1 Section 2 from Malton Bypass (at Brambling Fields) to Seamer Bypass (at Seamer Carr)

As mentioned earlier in the report, this scheme will involve the crossing of two tributaries of the River Derwent; Spittal Beck and Settrington Beck. There are several other crossing points along the route including the River Hertford just south of Seamer. The route passes through East Heselton Brow; south of East Heselton, a Site of Special Scientific Interest (SSSI).

17.11 Identification of Impacts of Section 2 On Line Route

17.11.1 Section 2 from Malton Bypass (at Brambling Fields) to Seamer Bypass (at Seamer Carr)

Construction Impacts

Drainage and Flooding

The existing vegetated areas which will form part of the scheme currently provide interception, transpiration and attenuation of rainfall within the catchment area of each watercourse. The removal of topsoil during the site strip will reduce the effective vegetated area, and in doing so may alter the run-off characteristics and flow volume into local watercourses. The impacts may include concentrated, and therefore increased peak flows, which in turn may induce flooding or scouring of the existing receiving waters.

Water Quality

Soil stripping, compound preparation, soil storage heaps and creation of embankments and cuttings may all contribute to increased sediment loading within receiving waters. This impact would be particularly significant prior to the compaction of these areas.

Sediments from topsoil are likely to comprise a proportion of organic particulate, which if eroded into a watercourse, would increase oxygen demand, potentially reducing downstream oxygen levels. Increased concentrations of suspended sediments can also settle downstream of outfalls, in areas of slower flow, resulting in a reduction of the flow of oxygen into the aerobic layer of the river bed.

Accidental spillages of site substances from plant and equipment, may also impact on the quality of all receiving waters, as well as the rivers into which they outfall.

Fisheries

Construction activities may result in increased levels of suspended sediments and the potential for spillages of hydrocarbons and other contaminants from plant and equipment. This could have a significant impact on aquatic ecosystems, including fisheries, and the introduction of these pollutants into the watercourses has the potential for serious degradation in water quality. Furthermore, disturbance to the river flow during the construction of structures, may impact upon salmonid migration and populations within each of the highlighted watercourses.

Groundwater

The local strata briefly consists of post glacial fluvial sand overlying intermittent boulder clay, glaciolacustrine deposits and sandstone bedrock, with groundwater classified as minor or non-aquifer.

A potential impact exists from accidental spillage of site substances at any location along the project. Infiltration of polluting substances through ground into the local aquifer may generate a long-term impact upon the quality of the groundwater.

Operational Impacts

Drainage and Flooding

The increase in impermeable carriageway surface area may alter the flow volume and characteristics within the receiving waters. Impacts may be generated from increased or extended peak flows, as well as changes to the existing streamlines within the watercourse. The impacts of these changes may include flooding effects due to the greater discharge and the possible throttle effect of in-river structures at each crossing location. Impacts on the river bed downstream of drainage may also be experienced due to enhanced scouring effects from increased flow, as well as possible disruption of the streamlines within the receiving waters at the outfall locations.

Construction of earthworks within the floodplain could impact upon the containment and distribution of waters during times of flooding.

Water Quality

Operational sources of contaminants include surface water runoff as well as major spills that occur during accidents. These sources result in a wide range of potential contaminants, including:

- Vehicle oil and other hydrocarbons
- Suspended sediments
- Metals
- Organic compounds – e.g., pesticides and herbicides
- Salt and other de-icing agents
- Nutrients

The potential impact on the receiving waters from accidental and prescribed discharges is the degradation of water quality within the receiving waters. These impacts may reduce the diversity of sensitive downstream aquatic ecosystems.

Fisheries

Potential impacts during the operational phase of the scheme include:

- effects on migratory fish due to changes in river flow patterns following construction of structures within the channels;
- potential impact on fish populations due to accidental spillages;
- potential impact on fish populations due to localised pollution effects due to increased surface water run-off;

Groundwater

The local strata briefly consists of post glacial fluvial sand overlying intermittent boulder clay, glaciolacustrine deposits and sandstone bedrock, with groundwater classified as minor or non-aquifer.

A potential impact exists from released contaminants draining from the carriageway, into the highway drainage system. The contaminants may then infiltrate into the aquifer beneath the site generating a long-term impact on water quality.

An impact on the groundwater may also be experienced in areas of cut, where the groundwater level may be artificially depressed due to carriageway and pre-earthworks drainage. Associated impacts may include changes to local hydrogeology, reduction in local abstraction borehole levels and changes to local surface ecosystems.

17.12 Possible Mitigation Measures of Section 2 On Line Route

17.12.1 Section 2 from Malton Bypass (at Brambling Fields) to Seamer Bypass (at Seamer Carr)

Construction Impacts

The following mitigation measures could be implemented during construction of the junction to reduce impacts upon the hydrological environment:

- Use of containment measures
- Avoid construction works in river, avoid disturbance of river during sensitive fisheries times (migration and spawning periods) at all crossing points
- Prepare Environmental Management Plan prior to Construction
- Ensure early construction of lagoons/ balancing ponds prior to construction at all discharge locations
- Consult with Environment Agency, English Nature and Fisheries organisations prior to construction
- Carry out water quality surveys before and during construction
- Follow Environment Agency’s Pollution Prevention Guidelines (PPG)

Actual mitigation measures should be determined following calculation of impacts upon water quality at each drainage location. Other areas of environmental impact should be considered through consultation to ensure mitigation measures for water quality do not cause adverse effects elsewhere (for example visual impact).

Operational Impacts

The following mitigation measures could be included within the scheme design to reduce impacts upon the hydrological environment:

-
- Use vegetative drainage and pollution control measures including balancing ponds, filtration ponds and reed beds where appropriate and feasible at each outfall location
- Provide interceptor system to carriageway drainage at each outfall location
- Use of filter drains within carriageway drainage system
- Provide vortex discharge control at each outfall location
- Provide penstock control at each outfall location
- Use manholes with sediment traps within carriageway drainage system
- Provide maintenance manual for drainage systems during operation
-

No existing or proposed drainage details were available. However, it is assumed that it does not include any vegetative treatment systems. The drainage systems could utilise a combination of techniques to reduce the polluting effect of carriageway run-off. Details of removal efficiency of each system are highlighted within the following table.

-

Actual mitigation measures should be determined following calculation of impacts upon water quality at each drainage location, at a later stage in the assessment process. Other areas of environmental impact should be considered through consultation to ensure mitigation measures for water quality do not cause adverse effects elsewhere (for example visual impact).

Treatment System	Removal Efficiency (%)		
	Zinc (Total)	Copper	Suspended

		(Dissolved)	Sediments
Engineered Systems			
Combined Filter Drains	70-80	10-30	80-90
Filtration Basin	70-80	10-30	60-90
Oil Separators	30-50	<10	30-80
Balancing Ponds - Dry	35-45	<10	30-60
- Wet	30-40	<10	40-70
Vegetative Systems			
Swales and Grassed Channels	70-90	50-70	60-90
Biofiltration techniques	50-80	50-80	50-80

Table 6 Treatment Systems Efficiency Table 2.2 Volume 11 (Section 3 Part 10) Design Manual for Roads and Bridges (DMRB) Water Quality and Drainage

17.13 Impact Assessment of Section 2

17.13.1 Section 2 from Malton Bypass (at Brambling Fields) to Seamer Bypass (at Seamer Carr)

Construction Impacts

Provides assessment of the potential construction impacts and includes the effects of the mitigation measures highlighted previously.

Impact	Potential Mitigation	Assessment		
		Importance	Magnitude	Significance
Drainage and Flooding				
Impact on beck flow characteristics due to in-river works may lead to flooding of local watercourses	Avoid construction works in river	Medium Lies within flood plain	Moderate Mitigation should reduce impact	Low significance Possible residual negative impact
Impact on beck flow characteristics due to in-river works, may lead to localised scouring of local watercourse beds	Avoid construction works in river	Low Lies within flood plain	Minor Mitigation should reduce impact	Insignificant Possible residual negative impact

Impact	Potential Mitigation	Assessment		
		Importance	Magnitude	Significance
Increase of river flow volume due to uncontrolled site run-off following topsoil strip, may lead to flooding of local watercourses.	Ensure early construction of lagoons/ balancing ponds prior to construction Prepare Environmental Management Plan (EMP) prior to construction Consult with Environment Agency prior to construction	Medium Lies within flood plain	Minor Mitigation should control impact	Insignificant Possible residual negative impact depending upon design
Water Quality				
Increased suspended sediment load within watercourses due to uncontrolled surface run-off	Ensure early construction of lagoons/ balancing ponds prior to construction Prepare Environmental Management Plan prior to construction Carry out water quality surveys before and during construction	High RQO 2, SSSI, cSAC tributary Salmanoid fishery	Minor Low probability with mitigation	Low significance Possible negative impact
Increased oxygen demanding material within watercourses due to uncontrolled run-off	Ensure early construction of lagoons/ balancing ponds prior to construction Prepare Environmental Management Plan prior to construction Carry out water quality surveys before and during construction	High RQO 2, SSSI, cSAC tributary Salmanoid fishery	Minor Low probability with mitigation Temporary reduction in Dissolved Oxygen Levels Possible moderate degree of aeration within stream	Low significance Possible negative impact

Impact	Potential Mitigation	Assessment		
		Importance	Magnitude	Significance
Possible eutrophication of local watercourses due to surface run-off of nitrogen and phosphorous compounds following topsoil strip of agricultural land	Ensure early construction of lagoons/ balancing ponds prior to construction Prepare Environmental Management Plan prior to construction Carry out water quality surveys before and during construction Consult with Environment Agency, English Nature and Fisheries Organisations prior to construction	High RQO 2, SSSI, cSAC tributary Salmanoid fishery	Minor Low probability due to limited increase in nitrate leaching and small area of land involved River system nitrate content currently moderate level Not within Nitrate Vulnerable Zone (NVZ)	Low Significance Possible slight negative impact
Pollution effect of accidental spillages of site substances (e.g. hydrocarbons etc) into local watercourses	Ensure early construction of lagoons/ balancing ponds prior to construction Prepare Environmental Management Plan prior to construction Follow Environment Agency's Pollution Prevention Guidelines (PPG)	High RQO 2, SSSI, cSAC tributary Salmanoid fishery	Minor Mitigation will significantly reduce probability May impact upon ecology – e.g. oils may reduce oxygen diffusion into watercourse	Low significance Possible negative impact
Fisheries				

Impact	Potential Mitigation	Assessment		
		Importance	Magnitude	Significance
Impact upon local salmonoid spawning areas and aquatic ecology due to settlement of suspended sediment load, mobilised by uncontrolled surface run-off	Use of Containment Measures Ensure early construction of lagoons/balancing ponds prior to construction Avoid disturbance of river during sensitive fisheries times (migration and spawning) Consult with Environment Agency, English Nature and Fisheries organisations prior to construction Existing drainage system could be used to control site perimeter	High RQO 2, SSSI, cSAC tributary Salmanoid fishery	Minor Possible Loss of salmonoid spawning area – due to siltation of river bed Potential oxygen demand within water phase Low probability with mitigation	Low significance Possible negative impact
Impact on salmonoid migration where flow controls are necessary to construct in-river works	Avoid construction works in river Avoid disturbance of river during sensitive times (migration and spawning)	High RQO 2, SSSI, cSAC tributary Salmanoid fishery	Negligible Mitigation should remove impact	Low Significance Potential negative impact
Groundwater				
Negative impact on groundwater due to infiltration of accidental site spillages	Use of containment measures Prepare Environmental Management Plan prior to construction Follow Environment Agency's Pollution Prevention Guidelines (PPG)	Low Minor aquifer	Negligible	Insignificant

Table 7 Construction Impacts Section 2 On line Route

Operational Impacts

The following table provides assessment of the potential operational impacts and includes the effects of the mitigation measures highlighted previously.

Impact	Potential Mitigation	Assessment		
		Importance	Magnitude	Significance
Drainage and Flooding				
Impact on river flow characteristics following construction of structures within channels, leading to flooding of local watercourses	Avoid construction works within river	High Lies within flood plain	Negligible Mitigation should remove impact	Insignificant Possible negative impact
Impact on river flow characteristics due to increased carriageway run-off, may lead to flooding of local watercourses	Provide vortex control and balancing ponds at each outfall if necessary	Low Lies within flood plain	Negligible Mitigation will control flow to level agreed with EA Minor impact may be experienced	Insignificant Residual negative impact
Water Quality				
Spillage Risk	Provide interceptor system to carriageway drainage Use of filter drains within carriageway drainage system Provide penstock control at each outfall Provide balancing ponds at each outfall	High RQO 2, SSSI, cSAC tributary Salmanoid fishery	Minor (2014 figures) Unmitigated Risk 1:98 Mitigated Risk 1:280	Low Significance Potential negative impact

Impact	Potential Mitigation	Assessment		
		Importance	Magnitude	Significance
Local Pollution Effect from carriageway run-off (Dissolved Copper and Total Zinc)	Use vegetative drainage and pollution control measures including filtration ponds and reed beds Use manholes with sediment traps Use of filter drains within carriageway drainage system Provide maintenance manual for drainage system during operation	High RQO 2, SSSI, cSAC tributary Salmanoid fishery	Negligible Assumed no decrease in run-off quality due to similar nature of traffic proposals Mitigation to remove significant proportion of Copper and Zinc if required	Low Significance Potential neutral/positive impact
Fisheries				
Impact on salmanoid migration due to changes in flow patterns following construction of structures within channels	Avoid construction of works within river	High SSSI/cSAC EC designated salmanoid fishery	Negligible Mitigation should remove impact	Insignificant Residual negative impact
Impact of accidental spillages within carriageway, on salmanoid populations	Provide interceptor system to carriageway drainage Use of filter drains within carriageway drainage system Provide penstock control at each outfall Provide balancing ponds at each outfall	High SSSI/cSAC EC designated salmanoid fishery	Minor (2014 figures) Unmitigated Risk 1:97 Mitigated Risk 1:276	Low significance Slight adverse impact

Impact	Potential Mitigation	Assessment		
		Importance	Magnitude	Significance
Local Pollution Effect from carriageway run-off (Dissolved Copper and Total Zinc) on salmonoid populations	Use vegetative drainage and pollution control measures including filtration ponds and reed beds Use manholes with sediment traps Use of filter drains within carriageway drainage system Provide maintenance manual for drainage system during operation	High SSSI/cSAC EC designated salmonoid fishery	Negligible See section 7.1 (Water Quality) Assumed no decrease in run-off quality Mitigation to remove significant proportion of Copper and Zinc if required	Insignificant Potential neutral/positive impact
Groundwater				
Infiltration of contaminants into aquifer from filter drains, following an accidental spillage within carriageway	Use impermeable liners within filter drains when constructing through porous material	Low Minor/non aquifer	Negligible Low Probability	Insignificant

Table 8 Operational Impacts Section 2 On Line Route

17.14 Summary of Section 2 On Line

17.14.1 Section 2 from Malton Bypass (at Brambling Fields) to Seamer Bypass (at Seamer Carr)

The main potential impacts on water quality and drainage have been identified to occur during the construction phase of the project, when flow control measures may be unable to contain increased flows from the sites. Assessment of the potential impacts is based on limited water quality information and may not offer a definitive appraisal of the overall magnitude of impacts. Further water quality analysis will be necessary at Stage II to define more reliable baseline conditions. In doing so, targeted mitigation could then be developed to address the negative impacts highlighted.

17.14.2 Limitations and Assumptions of Section 2 On Line from Malton Bypass (at Brambling Fields) to Seamer Bypass (at Seamer Carr)

DMRB guidelines advise that all roads require a minimum 1:100 year return period for major spillages. It should be noted that there are limitations to this data (see below), hence risks should be re-assessed with more accurate data when available.

17.14.3 Potential Further Mitigation of Section 2 from Malton Bypass (at Brambling Fields) to Seamer Bypass (at Seamer Carr)

All receiving watercourses are assumed to have sufficient capacity without requirement for alterations to downstream channel profile;

All mitigation proposed is assumed to be technically feasible, and to include provision for maintenance access;

All tributaries of main rivers are assumed to have a water quality objective value equal to that of the main river;

Drainage information not available, hence spillage risk calculations assume proposed designs drain to existing drainage system;

17.15 The Base Line Conditions of Section 2 Off Line

17.15.1 The Base Line Conditions Section 2 Off Line from Malton Bypass (at Brambling Fields) to Seamer Bypass (at Seamer Carr)

The length of the A64 covered in this study crosses several recognised water systems: Settrington Beck, The Cut, Clough Drain, Middle Fish Drain, High Fish Pond, Rillington Beck, Ass Beck, Sherburn Beck, West Beck, East Beck, Windle Beck, Spittal Beck, Keld Beck, Blakey Beck. The route crosses the River Derwent east of Malton and the river Hertford west of Seamer. The River Derwent is designated a Site of Special Scientific Interest (SSSI) due its spawning populations of river lamprey, in addition to other supporting species of interest. The site is also designated a candidate Special Area of Conservation (cSAC).

Environment Agency data records the River Derwent and some of the tributaries in the area as River Quality Objective (RQO) Grade 1 or 2, with generally very good or good chemical properties.

Flood plain information is illustrated in Figure 9053/s17/3/a –c.

The study area is not within any groundwater protection zone. The underlying bedrock is designated intermittently as either non-aquifer or minor aquifer. There are no licensed landfill sites within the study area.

Two tributaries of the River Derwent, Spital Beck and Settrington Beck, are EU designated salmonid fisheries. These, and their tributaries, cross the existing A64 route northwest to southeast. Yorkshire and District Amalgamation of Anglers control fishing rights for the River Derwent, and some of its tributaries and nearby ponds are also utilised for fishing purposes by the group.

17.15.2 The Legislative Framework Section 2 Off Line from Malton Bypass (at Brambling Fields) to Seamer Bypass (at Seamer Carr)

The principal legislation on water quality and discharges under which this assessment has been prepared are:

- Highways Act (1980);
- Water Resources Act (1991);
- The Groundwater Regulations (1998).

Whilst general guidance on the EU Water Framework Directive (WFD) is still being developed by UK Technical Advisory Group (UKTAG), this legislation is not incorporated within this assessment.

17.16 Scheme Description of Section 2 Off Line Route

17.16.1 Section 2 Off-Line from Malton Bypass (at Brambling Fields) to Seamer Bypass (at Seamer Carr)

As mentioned earlier in the report, this scheme will involve the crossing of two tributaries of the River Derwent; Spittal Beck and Settrington Beck. There are several other crossing points along the route including the River Hartford just south of Seamer.

17.17 Identification of Impacts of Section 2 Off Line

17.17.1 Section 2 off-line from Malton Bypass (at Brambling Fields) to Seamer Bypass (at Seamer Carr)

Construction Impacts

Drainage and Flooding

The existing vegetated areas which will form part of the scheme currently provide interception, transpiration and attenuation of rainfall within the catchment area of each watercourse. The removal of topsoil during the site strip will reduce the effective vegetated area, and in doing so may alter the run-off characteristics and flow volume into local watercourses. The impacts may include concentrated, and therefore increased peak flows, which in turn may induce flooding or scouring of the existing receiving waters.

Water Quality

Soil stripping, compound preparation, soil storage heaps and creation of embankments and cuttings may all contribute to increased sediment loading within receiving waters. This impact would be particularly significant prior to the compaction of these areas.

Sediments from topsoil are likely to comprise a proportion of organic particulate, which if eroded into a watercourse, would increase oxygen demand, potentially reducing downstream oxygen levels. Increased concentrations of suspended sediments can also settle downstream of outfalls, in areas of slower flow, resulting in a reduction of the flow of oxygen into the aerobic layer of the river bed.

Accidental spillages of site substances from plant and equipment, may also impact on the quality of all receiving waters, as well as the rivers into which they outfall.

Fisheries

Construction activities may result in increased levels of suspended sediments and the potential for spillages of hydrocarbons and other contaminants from plant and equipment. This could have a significant impact on aquatic ecosystems, including fisheries, and the introduction of these pollutants into the watercourses has the potential for serious degradation in water quality. Furthermore, disturbance to the river flow during the construction of structures, may impact upon salmonid migration and populations within each of the highlighted watercourses.

Groundwater

The local strata briefly consists of post glacial fluvial sand overlying intermittent boulder clay, glaciolacustrine deposits and sandstone bedrock, with groundwater classified as minor or non-aquifer.

A potential impact exists from accidental spillage of site substances at any location along the project. Infiltration of polluting substances through ground into the local aquifer may generate a long-term impact upon the quality of the groundwater.

Operational Impacts

Drainage and Flooding

The increase in impermeable carriageway surface area may alter the flow volume and characteristics within the receiving waters. Impacts may be generated from increased or extended peak flows, as well as changes to the existing streamlines within the watercourse. The impacts of these changes may include flooding effects due to the greater discharge and the possible throttle effect of in-river structures at each crossing location. Impacts on the river bed downstream of drainage may also be experienced due to enhanced scouring effects from increased flow, as well as possible disruption of the streamlines within the receiving waters at the outfall locations.

Construction of earthworks within the floodplain could impact upon the containment and distribution of waters during times of flooding.

Water Quality

Operational sources of contaminants include surface water runoff as well as major spills that occur during accidents. These sources result in a wide range of potential contaminants, including:

- Vehicle oil and other hydrocarbons
- Suspended sediments
- Metals
- Organic compounds – e.g., pesticides and herbicides
- Salt and other de-icing agents
- Nutrients

The potential impact on the receiving waters from accidental and prescribed discharges is the degradation of water quality within the receiving waters. These impacts may reduce the diversity of sensitive downstream aquatic ecosystems.

Fisheries

Potential impacts during the operational phase of the scheme include:

- effects on migratory fish due to changes in river flow patterns following construction of structures within the channels;
- potential impact on fish populations due to accidental spillages;
- potential impact on fish populations due to localised pollution effects due to increased surface water run-off;

Groundwater

The local strata briefly consists of post glacial fluvial sand overlying intermittent boulder clay, glaciolacustrine deposits and sandstone bedrock, with groundwater classified as minor or non-aquifer.

A potential impact exists from released contaminants draining from the carriageway, into the highway drainage system. The contaminants may then infiltrate into the aquifer beneath the site generating a long-term impact on water quality.

An impact on the groundwater may also be experienced in areas of cut, where the groundwater level may be artificially depressed due to carriageway and pre-earthworks drainage.

Associated impacts may include changes to local hydrogeology, reduction in local abstraction borehole levels and changes to local surface ecosystems.

17.18 Possible Mitigation Measures of Section 2 Off Line

17.18.1 Section 2 off-line from Malton Bypass (at Brambling Fields) to Seamer Bypass (at Seamer Carr)

Construction Impacts

The following mitigation measures could be implemented during construction of the junction to reduce impacts upon the hydrological environment:

- Use of containment measures
- Avoid construction works in river, avoid disturbance of river during sensitive fisheries times (migration and spawning periods) at all crossing points
- Prepare Environmental Management Plan prior to Construction
- Ensure early construction of lagoons/ balancing ponds prior to construction at all discharge locations
- Consult with Environment Agency, English Nature and Fisheries organisations prior to construction
- Carry out water quality surveys before and during construction
- Follow Environment Agency's Pollution Prevention Guidelines (PPG)

Actual mitigation measures should be determined following calculation of impacts upon water quality at each drainage location. Other areas of environmental impact should be considered through consultation to ensure mitigation measures for water quality do not cause adverse effects elsewhere (for example visual impact).

Operational Impacts

The following mitigation measures could be included within the scheme design to reduce impacts upon the hydrological environment:

- Use vegetative drainage and pollution control measures including balancing ponds, filtration ponds and reed beds where appropriate and feasible at each outfall location
- Provide interceptor system to carriageway drainage at each outfall location
- Use of filter drains within carriageway drainage system
- Provide vortex discharge control at each outfall location
- Provide penstock control at each outfall location
- Use manholes with sediment traps within carriageway drainage system
- Provide maintenance manual for drainage systems during operation

No existing or proposed drainage details were available. However, it is assumed that it does not include any vegetative treatment systems. The drainage systems could utilise a combination of techniques to reduce the polluting effect of carriageway run-off. Details of removal efficiency of each system are highlighted within the following table.

Actual mitigation measures should be determined following calculation of impacts upon water quality at each drainage location, at a later stage in the assessment process. Other areas of environmental impact should be considered through consultation to ensure mitigation measures for water quality do not cause adverse effects elsewhere (for example visual impact).

Treatment System	Removal Efficiency (%)		
	Zinc (Total)	Copper (Dissolved)	Suspended Sediments
Engineered Systems			
Combined Filter Drains	70-80	10-30	80-90
Filtration Basin	70-80	10-30	60-90
Oil Separators	30-50	<10	30-80
Balancing Ponds - Dry	35-45	<10	30-60
- Wet	30-40	<10	40-70
Vegetative Systems			
Swales and Grassed Channels	70-90	50-70	60-90
Biofiltration techniques	50-80	50-80	50-80

Table 9: Treatment Systems Efficiency Table 2.2 Volume 11 (Section 3 Part 10) Design Manual for Roads and Bridges (DMRB) Water Quality and Drainage

17.19 Impact Assessment of Section 2 Off Line

17.19.1 Section 2 off-line from Malton Bypass (at Brambling Fields) to Seamer Bypass (at Seamer Carr)

Construction Impacts

Provides assessment of the potential construction impacts and includes the effects of the mitigation measures highlighted previously.

Impact	Potential Mitigation	Assessment		
		Importance	Magnitude	Significance
Drainage and Flooding				
Impact on beck flow characteristics due to in-river works may lead to flooding of local watercourses	Avoid construction works in river	Medium Lies within flood plain	Moderate Mitigation should reduce impact	Low significance Possible residual negative impact
Impact on beck flow characteristics due to in-river works, may lead to localised scouring of local watercourse beds	Avoid construction works in river	Low Lies within flood plain	Minor Mitigation should reduce impact	Insignificant Possible residual negative impact

Impact	Potential Mitigation	Assessment		
		Importance	Magnitude	Significance
Increase of river flow volume due to uncontrolled site run-off following topsoil strip, may lead to flooding of local watercourses.	Ensure early construction of lagoons/ balancing ponds prior to construction Prepare Environmental Management Plan (EMP) prior to construction Consult with Environment Agency prior to construction	Medium Lies within flood plain	Minor Mitigation should control impact	Insignificant Possible residual negative impact depending upon design
Water Quality				
Increased suspended sediment load within watercourses due to uncontrolled surface run-off	Ensure early construction of lagoons/ balancing ponds prior to construction Prepare Environmental Management Plan prior to construction Carry out water quality surveys before and during construction	High RQO 2, SSSI, cSAC tributary Salmanoid fishery	Minor Low probability with mitigation	Low significance Possible negative impact
Increased oxygen demanding material within watercourses due to uncontrolled run-off	Ensure early construction of lagoons/ balancing ponds prior to construction Prepare Environmental Management Plan prior to construction Carry out water quality surveys before and during construction	High RQO 2, SSSI, cSAC tributary Salmanoid fishery	Minor Low probability with mitigation Temporary reduction in Dissolved Oxygen Levels Possible moderate degree of aeration within stream	Low significance Possible negative impact

Impact	Potential Mitigation	Assessment		
		Importance	Magnitude	Significance
Possible eutrophication of local watercourses due to surface run-off of nitrogen and phosphorous compounds following topsoil strip of agricultural land	Ensure early construction of lagoons/ balancing ponds prior to construction Prepare Environmental Management Plan prior to construction Carry out water quality surveys before and during construction Consult with Environment Agency, English Nature and Fisheries Organisations prior to construction	High RQO 2, SSSI, cSAC tributary Salmanoid fishery	Minor Low probability due to limited increase in nitrate leaching and small area of land involved River system nitrate content currently moderate level Not within Nitrate Vulnerable Zone (NVZ)	Low Significance Possible slight negative impact
Pollution effect of accidental spillages of site substances (e.g. hydrocarbons etc) into local watercourses	Ensure early construction of lagoons/ balancing ponds prior to construction Prepare Environmental Management Plan prior to construction Follow Environment Agency's Pollution Prevention Guidelines (PPG)	High RQO 2, SSSI, cSAC tributary Salmanoid fishery	Minor Mitigation will significantly reduce probability May impact upon ecology – e.g. oils may reduce oxygen diffusion into watercourse	Low significance Possible negative impact
Fisheries				

Impact	Potential Mitigation	Assessment		
		Importance	Magnitude	Significance
Impact upon local salmonoid spawning areas and aquatic ecology due to settlement of suspended sediment load, mobilised by uncontrolled surface run-off	Use of Containment Measures Ensure early construction of lagoons/balancing ponds prior to construction Avoid disturbance of river during sensitive fisheries times (migration and spawning) Consult with Environment Agency, English Nature and Fisheries organisations prior to construction Existing drainage system could be used to control site perimeter	High RQO 2, SSSI, cSAC tributary Salmanoid fishery	Minor Possible Loss of salmonoid spawning area – due to siltation of river bed Potential oxygen demand within water phase Low probability with mitigation	Low significance Possible negative impact
Impact on salmonoid migration where flow controls are necessary to construct in-river works	Avoid construction works in river Avoid disturbance of river during sensitive times (migration and spawning)	High RQO 2, SSSI, cSAC tributary Salmanoid fishery	Negligible Mitigation should remove impact	Low Significance Potential negative impact
Groundwater				
Negative impact on groundwater due to infiltration of accidental site spillages	Use of containment measures Prepare Environmental Management Plan prior to construction Follow Environment Agency's Pollution Prevention Guidelines (PPG)	Low Minor aquifer	Negligible	Insignificant

Table 10: Construction Impacts Section 2 Off line

Operational Impacts

The following table provides assessment of the potential operational impacts and includes the effects of the mitigation measures highlighted previously.

Impact	Potential Mitigation	Assessment		
		Importance	Magnitude	Significance
Drainage and Flooding				
Impact on river flow characteristics following construction of structures within channels, leading to flooding of local watercourses	Avoid construction works within river	High Lies within flood plain	Negligible Mitigation should remove impact	Insignificant Possible negative impact
Impact on river flow characteristics due to increased carriageway run-off, may lead to flooding of local watercourses	Provide vortex control and balancing ponds at each outfall if necessary	Low Lies within flood plain	Negligible Mitigation will control flow to level agreed with EA Minor impact may be experienced	Insignificant Residual negative impact
Water Quality				
Spillage Risk	Provide interceptor system to carriageway drainage Use of filter drains within carriageway drainage system Provide penstock control at each outfall Provide balancing ponds at each outfall	High RQO 2, SSSI, cSAC tributary Salmanoid fishery	Minor (2014 Figures) Unmitigated Risk 1:118 year Mitigated Risk 1:337 year	Low Significance Potential negative impact

Impact	Potential Mitigation	Assessment		
		Importance	Magnitude	Significance
Local Pollution Effect from carriageway run-off (Dissolved Copper and Total Zinc)	Use vegetative drainage and pollution control measures including filtration ponds and reed beds Use manholes with sediment traps Use of filter drains within carriageway drainage system Provide maintenance manual for drainage system during operation	High RQO 2, SSSI, cSAC tributary Salmanoid fishery	Negligible Assumed no decrease in run-off quality due to similar nature of traffic proposals Mitigation to remove significant proportion of Copper and Zinc if required	Low Significance Potential neutral/positive impact
Fisheries				
Impact on salmanoid migration due to changes in flow patterns following construction of structures within channels	Avoid construction of works within river	High SSSI/cSAC EC designated salmanoid fishery	Negligible Mitigation should remove impact	Insignificant Residual negative impact
Impact of accidental spillages within carriageway, on salmanoid populations	Provide interceptor system to carriageway drainage Use of filter drains within carriageway drainage system Provide penstock control at each outfall Provide balancing ponds at each outfall	High SSSI/cSAC EC designated salmanoid fishery	Minor (2014 Figures) Unmitigated Risk 1:118 year Mitigated Risk 1:337 year	Low significance Slight adverse impact

Impact	Potential Mitigation	Assessment		
		Importance	Magnitude	Significance
Local Pollution Effect from carriageway run-off (Dissolved Copper and Total Zinc) on salmonoid populations	Use vegetative drainage and pollution control measures including filtration ponds and reed beds Use manholes with sediment traps Use of filter drains within carriageway drainage system Provide maintenance manual for drainage system during operation	High SSSI/cSAC EC designated salmonoid fishery	Negligible See section 7.1 (Water Quality) Assumed no decrease in run-off quality Mitigation to remove significant proportion of Copper and Zinc if required	Insignificant Potential neutral/positive impact
Groundwater				
Infiltration of contaminants into aquifer from filter drains, following an accidental spillage within carriageway	Use impermeable liners within filter drains when constructing through porous material	Low Minor/non aquifer	Negligible Low Probability	Insignificant

Table 11: Operational Impacts Section 2 Off line

17.20 Summary of Section 2

17.20.1 Section 2 off-line from Malton Bypass (at Brambling Fields) to Seamer Bypass (at Seamer Carr)

The main potential impacts on water quality and drainage have been identified to occur during the construction phase of the project, when flow control measures may be unable to contain increased flows from the sites. Assessment of the potential impacts is based on limited water quality information and may not offer a definitive appraisal of the overall magnitude of impacts. Further water quality analysis will be necessary at Stage II to define more reliable baseline conditions. In doing so, targeted mitigation could then be developed to address the negative impacts highlighted.

17.20.2 Limitations and Assumptions of Section 2 off-line from Malton Bypass (at Brambling Fields) to Seamer Bypass (at Seamer Carr)

DMRB guidelines advise that all roads require a minimum 1:100 year return period for major spillages. It should be noted that there are limitations to this data (see below), hence risks should be re-assessed with more accurate data when available.

17.20.3 Potential Further Mitigation of Section 2 off-line from Malton Bypass (at Brambling Fields) to Seamer Bypass (at Seamer Carr)

- All receiving watercourses are assumed to have sufficient capacity without requirement for alterations to downstream channel profile;
- All mitigation proposed is assumed to be technically feasible, and to include provision for maintenance access;
- All tributaries of main rivers are assumed to have a water quality objective value equal to that of the main river;
- Drainage information not available, hence spillage risk calculations assume proposed designs drain to existing drainage system;

The Water Framework Directive may effect mitigation proposals.

17.21 Overall Summary

Due to the limited information available at this time, a precautionary approach to the assessment has highlighted the major impacts during the construction phase. Control of constructional activities through the recommended mitigation will ensure reduced impacts during the construction phase of the work. It is anticipated that a more detailed assessment process (stage 2) will confirm whether the constructional impacts identified, can be fully mitigated. However, to a certain extent constraints are known, the only variable is related to the scheme design. It is anticipated that The Water Framework Directive, when fully implemented will have an impact on the construction and operational constraints of the scheme.

It is likely that impacts during the construction phase will be neutral to slightly adverse in the construction phase, but slightly beneficial in the operational phase.

18 GEOLOGY AND SOILS

18.1 Introduction

This section describes the solid and drift geology of the study area, with particular reference to important geological or geomorphological sites, potentially contaminated land and the impact on controlled groundwater.

The objectives are to:

- Identify impacts the scheme may have on significant sites or features.
- Identify impacts upon the scheme of any potentially affected sites or features and any constraints these may impose.
- Propose mitigation measures to reduce or avoid any impacts either from or upon the scheme.

18.2 Assessment Techniques and Methodology

18.2.1 Guidelines

The methodology adopted is contained in Volume 11 of the Design Manual for Roads and Bridges, (DMRB) Section 3, Part 11: Geology and Soils, published June 1993.

18.2.2 References

The following references have been used:

- The general superficial and solid geology has been taken from
- British Geological Survey Map, Sheet 63, ‘York’ Solid and Drift Series, (1:50,000 scale);
- British Geological Survey Map, Sheet 53, ‘Pickering’ Solid and Drift Series, (1:50,000 scale);
- British Geological Survey Map, Sheet 54, ‘Scarborough’ Solid and Drift Series, (1:50,000 scale);
- City York Council – Land Quality Search
- Scarborough Borough Council - Land Quality Search
- DEFRA – Land Agricultural Land Classification
- Environment Agency (2004) What’s in my Back Yard? [online] Environment Agency, UK. Available from: <http://www.environment-agency.gov.uk/yourenv> [last accessed 13/5/2004]

18.2.3 Methodology

Information on the existing study area has been gathered from a variety of sources (as detailed above).

In the absence of a specific methodology and reference in Volume 11 of the DMRB, the assessment of the severity of impacts is based on the following:

- Direct damage to important geological or geomorphological sites.
- Direct impact of the scheme on controlled waters within or adjacent to the scheme.
- Destruction or damage to agricultural soils.
- Disturbance of contaminated material, with consequent risk to human and other receptors.
- Impact of excavation or filling and multiple handling of soils.

A walk-over reconnaissance survey was completed in 1st November 2004 in order to confirm the general topography, geology and geomorphology of the study area. Particular attention was paid to exposures in existing cuttings. Ground water observations were also made.

Definition of Scale of Impact

Due to the nature of the scheme and the limited sources of information, it is not possible to distinguish between the subtleties of scales of impact possible during later assessments. As such, the scales of impact will be as defined in Table 1

Magnitude	Criteria
High	Major impact with potential to result in loss of attribute
Low	Minor impact on attribute
Negligible	No Discernable impact

Table 1 – Scale of Impact

Assumptions

It is assumed that, in accordance with the Geotechnical Certification requirements of HD22/02, normal best practice ground investigation will be carried out along the route of the proposed scheme prior to final design, thereby providing detailed information to permit the formulation of appropriate mitigating measures for any identified impacts.

It is further assumed that the intrusive investigation techniques will have no more potential impact than the eventual construction. Areas where this may not be the case have been identified in appropriate sections of this assessment.

Limitations

Assessments have been made on proposals, which are at an early stage of development; there is limited information available regarding land take, cuttings and embankments, construction activities etc.

Without detailed proposals and field data, it is not possible to put forward detailed mitigation proposals. However, the mitigation measures, which have been suggested, are thought to be appropriate based on the information available.

Within the time frame, it has not been possible to agree the mitigation proposals with the Highways Agency, therefore these measures are subject to modification and development.

It is understood that relevant ground investigation information could be available along the route option identified for the scheme. However, at this stage it is assumed that the ground conditions do not vary beyond the generic ranges identified from published material.

Significant areas of the scheme options lie across agricultural land and access has not always been practicable. Wherever possible, sites of particular interest have been visited on the ground.

18.2.4 The Base Line Conditions of Section 1, from York Bypass (at A1237 Hopgrove junction) to Malton Bypass (at B1248 Musley Bank Junction)

The Legislation Framework

Designated Sites

Geological and geomorphological features which are considered to be of national importance are designated as Sites of Special Scientific Interest.

Sites of Special Scientific Interest (SSSIs) have some legal protection under the *Wildlife and Countryside Act 1981* (see ANNEXES III and IV), against operations which might damage their interest (details are set out in the English Nature publication 'What you should know about Sites of Special Scientific Interest' 1992).

Such designations are mostly for planning purposes only, and while a local authority may have a stated policy of avoiding development in these areas, there is no statutory protection process.

Non-Statutory Designated Sites

Other sites of geological importance may be designated as Regionally Important Geological Sites (RIGS). RIGS are any geological or geomorphological sites, excluding SSSIs, in a county that are considered worthy of protection for their educational, research, historical or aesthetic importance.

Existing Conditions – Geology

No artificial ground is evident from the available geological maps. However, made ground could be present across the site areas, associated with the development of the existing road and from areas associated at old quarries, sand and clay pits within the area of investigation.

The site is underlain by a variable sequence of superficial deposits comprising mainly clay and sand (glaciolacustrine deposits) that overlies glacial till comprising gravelly and sandy clay.

The area of study is underlain by the following Solid Geology:

- Sherwood Sandstone Group. This is one of the region's most important aquifer. In general, the beds dip gently to the east. These comprise light grey and red slightly calcareous, cross-bedded fine to medium grained sandstone with thin beds of red mudstone.

The Penarth Group. This is generally grey/black mudstone with subordinate limestone and sandstone.

The Mercia Mudstone Group. This group is generally formed of red/grey mudstone and subordinate thin beds of gypsum /anhydrite.

18.2.5 Existing Conditions – Statutory and Important Site

According to the Environment Vulnerability Maps, Sheets No 8 and 9, the area of study is underlain by a Non Aquifer, Minor Aquifer (Low to Intermediate Permeability) and a Major Aquifer (High Permeability).

The Penarth Group is classified as a “Non Aquifer.” However, some groundwater flow through these formations may occur and this should be taken into account when considering persistent pollution. The alluvium glaciofluvial sands and gravels and the glaciolacustrine sands and gravels are classified a “Minor Aquifer.” Shallow groundwater will probably occur in the glaciofluvial and glaciolacustrine sands and gravels, and also within any sand and gravel lenses present within the till.

The Sherwood Sandstone Group is a “Major Aquifer” in the area with high soil leaching potential.

No groundwater protection zones or pollution incidents have been identified in relation to groundwater.

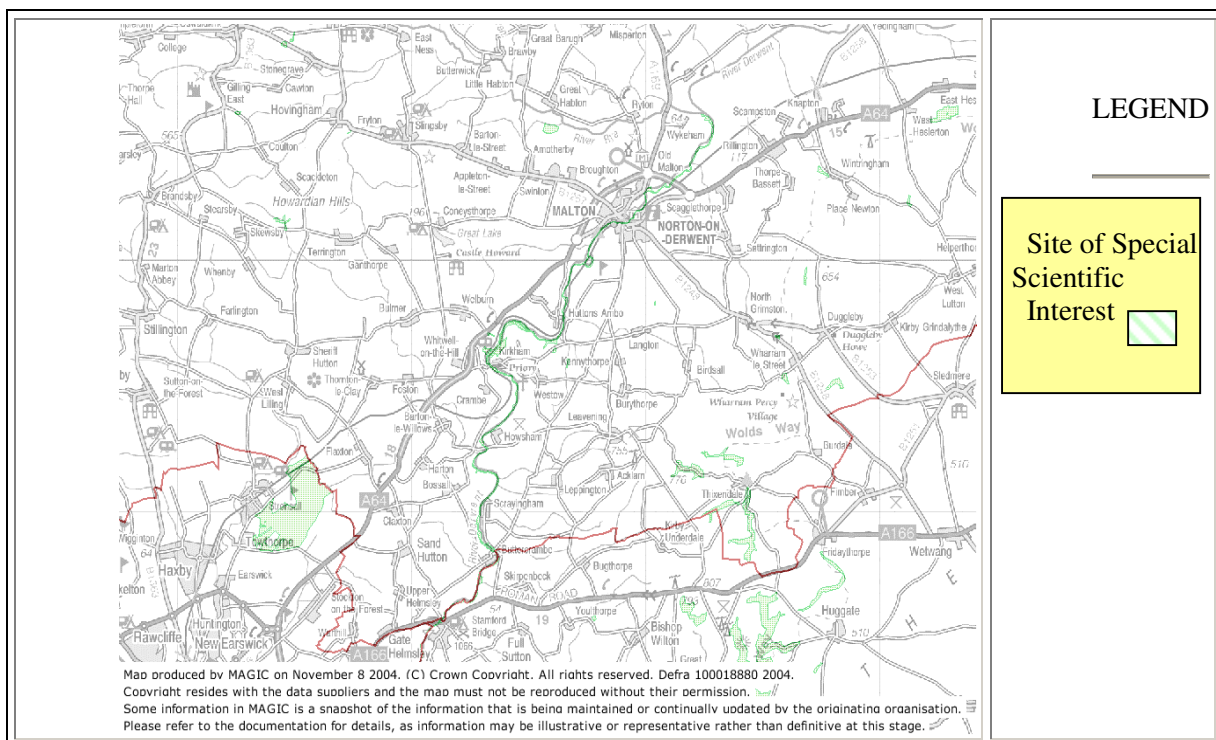
No groundwater abstraction points have been identified in the area of study.

There are known Sites of Special Scientific Interest within the study area. These include the following (Table 2, Figure 1):

Site Name	Hectares	Grid Reference	
		East	North
River Derwent	-	472830	461650
Strensall Common	571.99	465280	459800
Kirkham Park and Riverside	43.02	473200	466365
Mount Pleasant Quarry	1.03	473380	467035

Table 2 – SSSI Site

Figure 1 – Site of Special Scientific Interest



There are no known Regionally Important Geological Sites within the study area.

There are no known areas of underground mineral extraction within the study area. No mineral sites held on BGS records have been identified in the area.

There are no known landslides or other unstable areas within the study area.

According to the Environment Agency web site, several waste disposal sites are located at a distance of up to 250 metres within the study area.

It is understood that a number of former quarry sites and unknown filled ground are present within the area of study.

According to DEFRA, the majority of the site of study covers an area classified as Grade 3. Grade 3 is defined as land with moderate limitations due to the soil (structure, texture, drainage, depth, stoniness or water holding capacity) relief or climate, or some combination of these factors, which restrict the choice of crops, timing of cultivation, or level or yield (Appendix 17.01).

18.3 Scheme Description of Section 1

18.3.1 Section 1 from York Bypass (at A1237 Hopgrove junction) to Malton Bypass (at B1248 Musley Bank Junction)

The study in question lies between OSGR 464150E, 455330N to 476750E, 470250N.

The majority of the route corridor for option 1 is online with the existing A64. The locations where the route corridor goes slightly offline are from:

- Hazelbush Cottage to Sand Hutton road junction.
- West of Hutton Hill to Barnygate Lane junction.
- Sawkill Farm access junction to Roughborough Farm access junction.

18.4 Identification of Impacts of Section 1

18.4.1 Section 1 from York Bypass (at A1237 Hopgrove junction) to Malton Bypass (at B1248 Musley Bank Junction)

It is not envisaged that there will be significant earthworks along the A64 for the above proposed route option. The consequent impact upon the geology and geomorphology will be negligible.

There is no geological or geomorphological feature that is likely to adversely impact the scheme.

It is anticipated that contamination issues for the site are unlikely to be found. However, there are several former quarries, unknown filled ground and landfill sites within the study area. From the available information, it is probable that the Scarborough Formation (Sherwood Sandstone Group) will not be competent enough to permit unsupported rock faced cuttings in the long term and no exposures will be available upon completion of the scheme.

18.4.2 Possible Mitigation Measures of Section 1

Section 1 from York Bypass (at A1237 Hopgrove junction) to Malton Bypass (at B1248 Musley Bank Junction)

See Chapter 17, Water Quality which specifies mitigation in respect of pollution incidents.

18.5 Impact Assessment of Section 1

18.5.1 Section 1 from York Bypass (at A1237 Hopgrove junction) to Malton Bypass (at B1248 Musley Bank Junction)

There is the possibility of severe impact on the vulnerable major and minor aquifer beneath the site, as a result of accidental spillage (particularly of hydrocarbons from fuel, lubricants and hydraulic systems). This has the potential to be most severe during the construction phase before interceptor drains provided as part of the construction are fully developed.

There is no known contamination within the site, but it may be expected that areas of artificial ground could contain potentially contaminated material. These will require disposal to licensed waste disposal facilities, as there is not likely to be a sufficient volume to economically remediate in-situ. Potential mitigation measures include adequate and flexible ground investigation to enable early recognition and definition of the problem and adequate geotechnical or geo-environmental supervision during the construction phase.

With respect to further site investigation, drilling boreholes is classified as a ‘Potentially Damaging Operation.’ This has the potential to open preferential pathways for downward migration of the near surface contamination into the underlying aquifer. Drilling methods would require the prior agreement of English Nature.

A similar situation exists when excavating exploratory holes through drift cover into the underlying aquifer. This has the potential to open a preferential pathway for the downward migration of near surface contamination.

18.6 Summary of Section 1

18.6.1 Potential Further Mitigation of Section 1 from York Bypass (at A1237 Hopgrove junction) to Malton Bypass (at B1248 Musley Bank Junction)

The potential for possible damage to agricultural land and soils should be mitigated by fencing the eventual highway boundary at the earliest possible stage of construction. This should be followed by topsoil stripping. In this way, the tracking of plant across landscape soils will be avoided.

To minimise reworking, topsoil required for re-use should be stockpiled as close to the point of eventual deposition as possible.

In order to mitigate disposal of surplus material or importing of fill, a balanced earthworks outline would be an advantage. Consideration should also be given to using excavated Glacial Till as backfill to structures, rather than imported selected fill.

If there is a shortfall of material for the scheme, consideration should be given to the possibility of using one of the abundant quarries in the area as a source.

Overall, there is likely to be a neutral to slight adverse impact caused by the scheme.

Areas of unknown unfilled ground and landfill sites are present within the area of study. It appears unlikely that there are sources which generate volumes of gases. However, further investigation in these areas will be necessary to confirm if any landfill type gases are present.

To mitigate the possible impact on the aquifer, all fuel should be delivered to the site and stored in adequately bounded areas and refuelling and maintenance should be carried out at surfaced compounds with adequate interceptor drainage facilities. Plant should be parked and stored in similar areas. Properly designed interceptor drainage, in accordance with Environment Agency requirements, will be required as part of the scheme design for the permanent situation.

For exploratory borehole operation, the mitigation measure is to use clean drilling techniques and double cased boreholes where appropriate. Boreholes should be grouted to the surface on completion unless required for the installation of monitoring apparatus.

18.6.2 The Base Line Conditions of Section 2 from Malton Bypass (at Brambling Fields) to Seamer Bypass (at Seamer Carr)

The Legislative Framework

Refer to points outlined in Section 18.2.4.

Existing Conditions – Geology

No artificial ground is evident from the available geological maps. However, made ground could be present across the site areas, associated with the development of the existing road, and from areas associated at old quarries, sand and clay pits within the area of investigation

The site is underlain by a variable sequence of superficial deposits comprising alluvium deposits (mainly clay), lacustrine deposits (silty, clay and sand, locally with peat) that overlies glacial till comprising granular material of varying density interbedded with normally-consolidated clay.

The Solid Geology for the site is as follows:

- Cretaceous Speeton Clay (clay with limestone and phosphate concretion)
- Upper Jurassic Kimmeridge Clay (the Kimmeridge Clay can typically comprise clay interbedded with limestone bands. The clay gradually changes to a mudstone with depth.
- Upper Jurassic Calcareous Grit Formation (Siltstone and Sandstone)

Existing Conditions – Statutory and Important Site

According to the Environment Vulnerability Maps, Sheet No 9, the area of study is underlain by a Non Aquifer, Minor Aquifer (Low to Intermediate Permeability) and a Major Aquifer (High Permeability).

The glacial deposits (Sand and gravel) is classified a “Minor Aquifer”.

The Grit Formation is a “Major Aquifer” in the area with high soil leaching potential. According to the Environment Agency, there is a groundwater protection zone within the study area (Figure No 2 and Figure No 3).

No groundwater abstraction points have been identified in the area of study.

There are known Sites of Special Scientific Interest within the study area. These include the following (Table 3, Figure No 4):

Table 3 – SSSI Site

Site Name	Hectares	Grid Reference	
		East	North
River Derwent	-	482610	475600
East Heslerton Brow	40.14	492800	475750
Wintringham Marsh	5.97	487530	473440

Figure No 2 - Groundwater Protection Zone

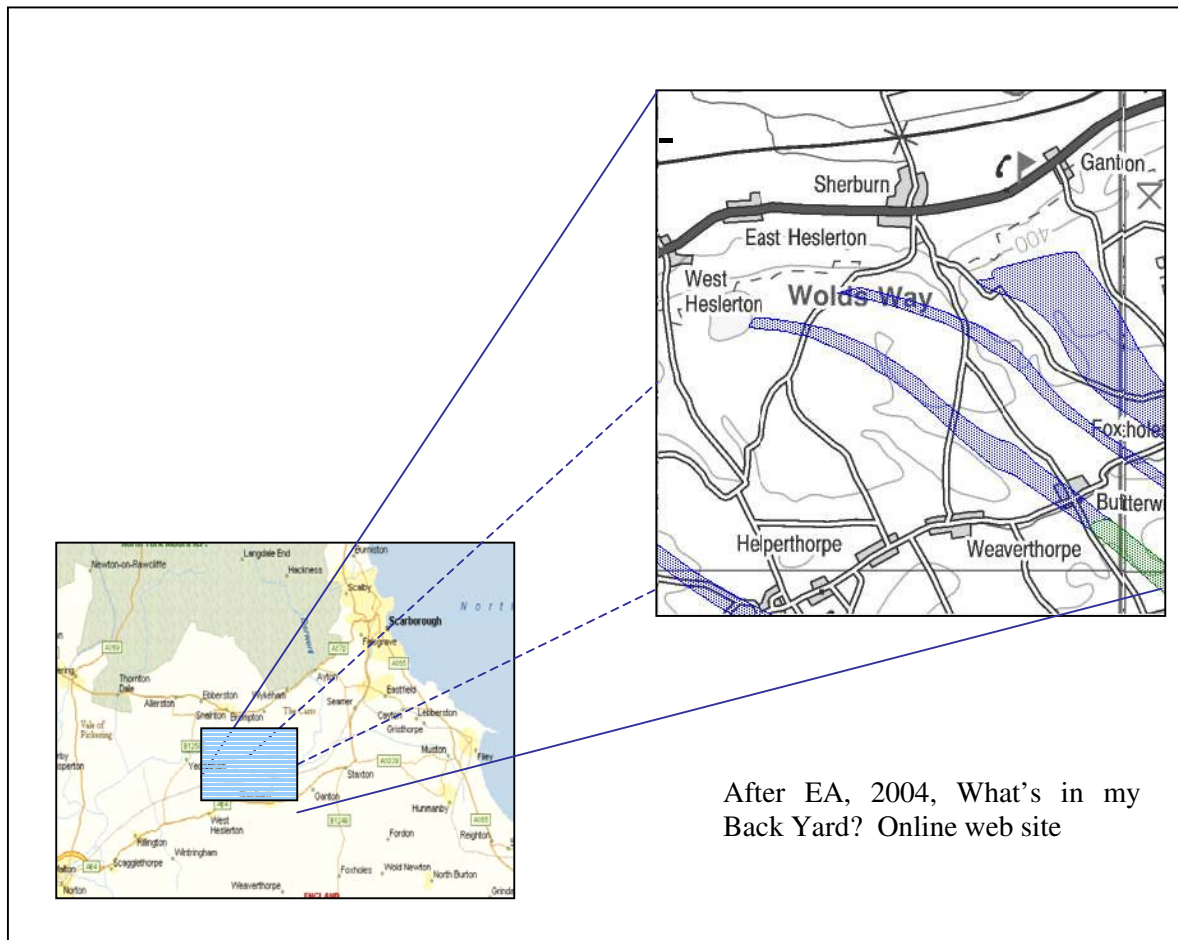


Figure No 3 - Groundwater Protection Zone

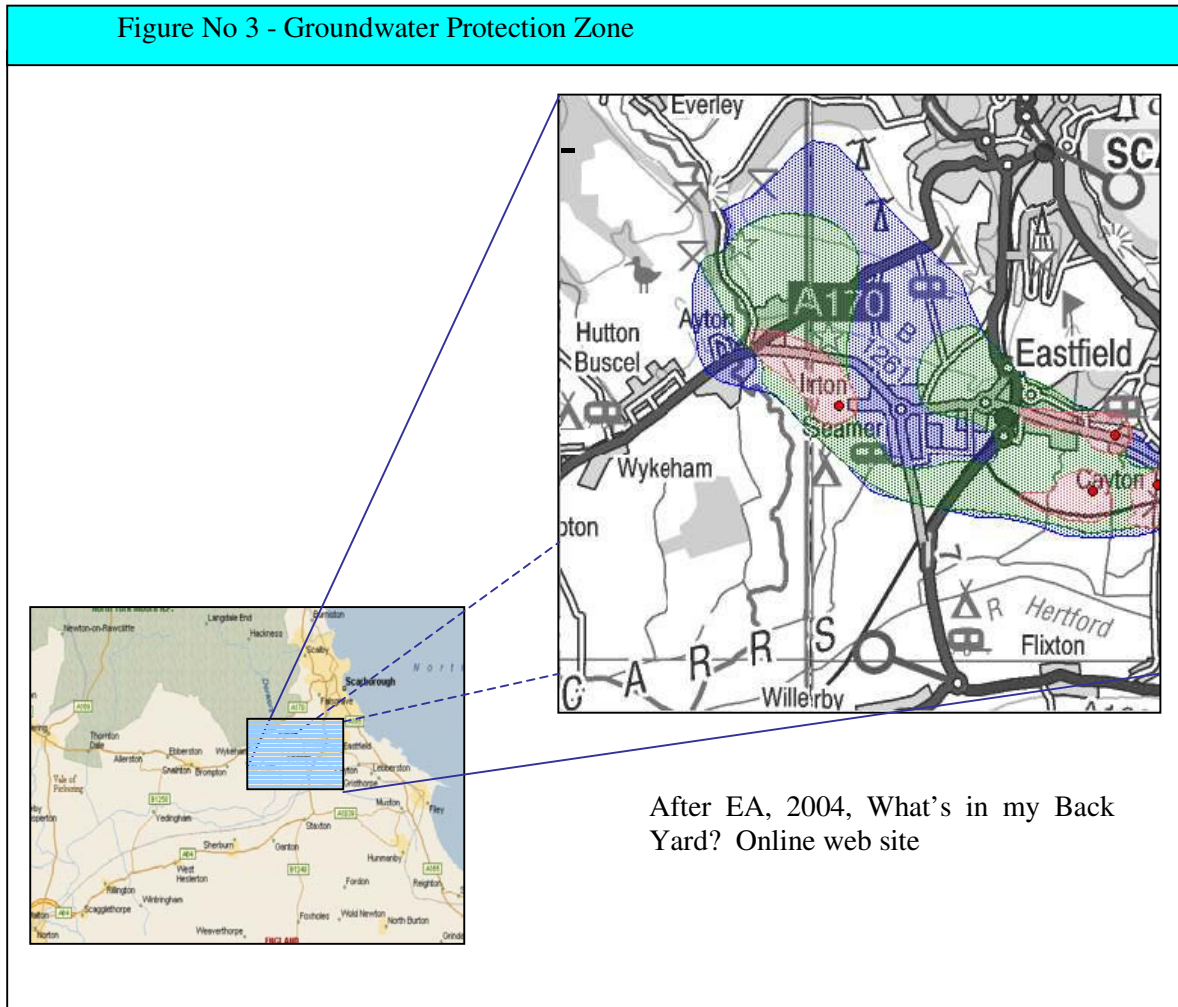
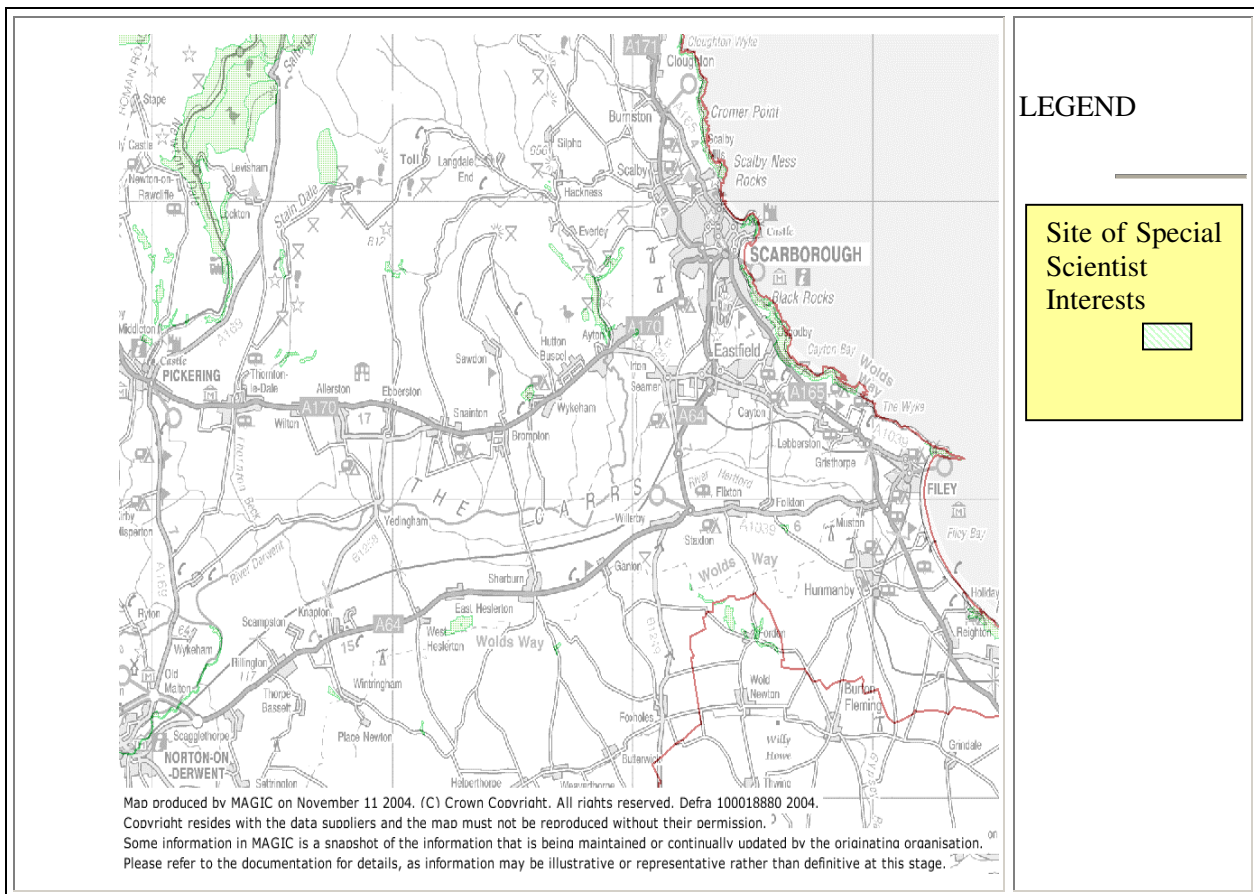


Figure No 4 - Site of Special Scientific Interest



It is understood that no Regionally Important Geological Sites are located within the study area.

From the data available, it is understood that there are no known areas of underground mineral extraction within the study area. No mineral sites held on BGS records have been identified in the area.

There are no known landslides or other unstable areas within the study area (no landslips are shown in the available geological maps). On the other hand, the BGS map which was consulted states that landslipped areas are known to be common on and below many of the steeper slopes in the district. A geomorphological survey may be required prior to the Construction Phase.

According to the Environment Agency web site, several waste disposal sites are located at a distance of up to 250metres within the study area.

It is understood that a number of former quarry sites and unknown filled ground are present within the area of study.

According to DEFRA, the majority of the site of study covers an area classified as Grade 3. Grade 3 is defined as land with moderate limitations due to the soil (structure, texture, drainage, depth, stoniness or water holding capacity) relief or climate, or some combination of

these factors which restrict the choice of crops, timing of cultivation, or level or yield (Appendix 18.01).

18.7 Scheme Description of Section 2

18.7.1 Section 2 from Malton Bypass (at Brambling Fields) to Seamer Bypass (at Seamer Carr)

The study area in question lies between O.S.G.R 482540E, 472510N to 501880E, 481720N. Two possible solutions to improve safety at the A64 have been proposed:

On Line Route

The proposed route corridor starts online with the existing A64 but quickly goes offline so that the proposed route corridor is diverted to the south of Rillington. The route corridor continues offline in a north-easterly direction winding around the outskirts of West Heslerton and East Heslerton before becoming online for a short distance at Grange Cottage. The route corridor then realigns south of Sherburn and Glanton and then goes into a long north-eastern straight that connects to the Seamer Bypass.

Off Line Route

This route takes a northerly direction commencing at the Malton bypass at Brambling Fields. To the east of Scagglethorpe Grange, the route corridor changes in a north-easterly direction following the same alignment as the railway line for the most part. Occasionally the route corridor moves further south in order to accommodate junctions where existing roads are crossed.

18.8 Identification of Impacts of Section 2 On Line and Off Line

18.8.1 Section 2 from Malton Bypass (at Brambling Fields) to Seamer Bypass (at Seamer Carr)

The impact is the same for each option unless otherwise stated. It is not envisaged that there will be significant earthworks along the A64 for the above proposed route option. The consequent impact upon the geology and geomorphology will be negligible.

There is no geological or geomorphological feature that is likely to be adversely impacted by the scheme as envisaged.

It is anticipated that contamination issues for the site are unlikely to be found. However, there are several former quarries, unknown filled ground and landfill sites within the study area. During the work phase, it is unlikely that any exposed rock will be stable enough to permit unsupported rock faced cuttings in the long term and so no exposure will be available upon completion of the scheme.

18.9 Possible Mitigation Measures of Section 2 On Line and Off Line

18.9.1 Section 2 from Malton Bypass (at Brambling Fields) to Seamer Bypass (at Seamer Carr)

See Chapter 17, Water Quality which specifies mitigation in respect of pollution incidents.

18.10 Impact Assessment of Section 2

18.10.1 Section 2 from Malton Bypass (at Brambling Fields) to Seamer Bypass (at Seamer Carr)

There is the possibility of severe impact on the vulnerable major and minor aquifer below the site from accidental spillage (particularly of hydrocarbons from fuel, lubricants and hydraulic systems) during construction works.

There is no known contamination within the site, but it may be expected that areas of artificial ground could contain potentially contaminated material. These will require disposal to licensed waste disposal facilities, as there is not likely to be a sufficient volume to economically remediate in-situ. Potential mitigation measures include adequate and flexible ground investigation to enable early recognition and definition of the problem, and adequate geotechnical or geo-environmental supervision during the construction phase.

With respect to the SSSI Site, drilling of boreholes is classified as a 'Potential Damaging Operation,' and the drilling method would require the prior agreement of English Nature. A similar situation exists when excavating exploratory holes through drift cover into the underlying aquifer. This has the potential to open a preferential pathway for the downward migration of near surface contamination.

18.11 Summary of Section 2

18.11.1 Route Summary

As the options are generally the same, it is considered that the impact is the same for each route. The impact would be neutral to slightly adverse.

18.11.2 Potential Further Mitigation of Section 2 from Malton Bypass (at Brambling Fields) to Seamer Bypass (at Seamer Carr).

The potential for damage to agricultural land and soils should be mitigated by fencing the eventual highway boundary at the earliest possible stage of construction. This should be followed by topsoil stripping. In this way, the tracking of plant across landscape soils will be avoided.

To minimise reworking, topsoil required for re-use should be stockpiled as close to the point of eventual deposition as possible.

In order to mitigate disposal of surplus material or importing of fill, a balanced earthworks outline would be an advantage. Consideration should also be given to using excavated Glacial Till as backfill to structures, rather than imported selected fill.

If there is a shortfall of material for the scheme consideration should be given to the possibility of using one of the abundant quarries in the area as a source.

Areas of unknown unfilled ground landfill site are present within the area of study. It appears unlikely that there are sources, which generate volume of gases. However, further investigation in these areas will be necessary to confirm if any landfill type gases area present.

To mitigate the possible impact on the aquifer, all fuel should be delivered to site and stored in adequately bounded areas. Refuelling and maintenance should be carried out at surfaced compounds with adequate interceptor drainage facilities. Plant should be parked and stored in similar areas. Properly designed interceptor drainage, in accordance with Environment Agency requirements, will be required as part of the scheme design for the permanent situation.

For exploratory borehole operation, the mitigation measure is to use clean drilling techniques and double cased boreholes where appropriate. Boreholes should be grouted to the surface on completion unless required for the installation of monitoring apparatus.

19 IMPACT OF THE SCHEME ON POLICIES AND PLANS

19.1 Introduction

The development plan system provides the basis on which decisions about the development and use of land are made. Development plans are prepared by local planning authorities within the framework of national policies and regional and any strategic planning guidance.

This section reports on how the proposed A64 dualling York to Seamer may impact on local, regional and national policies and plans.

19.2 Assessment Techniques and Methodology

19.2.1 Guidelines

The study was carried out in accordance with Design Manual for Roads and Bridges (DMRB), Volume 11: Environmental Assessment, Section 3, Part 12.

19.2.2 References

As below

19.2.3 Methodology

Baseline Survey

The baseline survey consisted of a desk-based assessment of local, regional and national planning policies, and regional and national planning policy guidance. In all relevant cases these are available on the internet, including the Local Plans of Ryedale District Council and Scarborough Borough Council, North Yorkshire Local Transport Plan, North Yorkshire Joint Structure Plan, Regional Policy Guidance from the Government Office for Yorkshire and The Humber, and Planning Policy Guidance from the Office of the Deputy Prime Minister.

Definition of Scales of Impact

Impacts are described in terms of whether policies and plans are facilitated or hindered, together with a brief commentary where appropriate.

Development of Possible Mitigation Measures

No mitigation measures are proposed in relation to impacts on policies and plans.

Assessment of Impacts

Design proposals were assessed against relevant policies and plans to determine how the schemes may affect them. Consideration was given to whether policies relate to defined areas only, or to defined areas and their surroundings.

Limitations to Surveys or Assessments

The study is based on documentary sources only, and no site visits or direct contacts with local planning authorities have been made.

To avoid double-counting of impacts, effects on policies which are assessed elsewhere are not included in this chapter. Examples include some policies relating to cultural heritage, biodiversity and nature conservation, and agricultural land.

Assessments have been made on proposals which are at an early stage of development. Therefore there is limited information available regarding land take, cuttings and embankments, construction activities etc.

Assumptions in the Assessment

None.

19.3 The Base Line Conditions of Section 1

19.3.1 The Base Line Conditions Section 1 from York Bypass (at A1237 Hopgrove junction) to Malton Bypass (at B1248 Musley Bank Junction)

For the purpose of this study a 1 kilometre corridor either side of the proposed route is being assessed.

National, Regional, County or District level policies will be included as will those specifically relating to the Howardian Hills Area of Outstanding Natural Beauty.

19.3.2 The Legislative Framework Section 1 from York Bypass (at A1237 Hopgrove junction) to Malton Bypass (at B1248 Musley Bank Junction)

In England and Wales, the Government issues national guidance to local planning authorities, after consultation on draft proposals. This and other national policies must be taken into account by authorities in preparing development plans, along with any regional and any strategic planning guidance. The aim is to secure a broad measure of consistency of approach between authorities, while allowing for local interests to be reflected.

Regional planning guidance (RPG) includes guidance on regional transport strategy and priorities for such matters as the environment, housing, economic development and other forms of development and infrastructure. It provides a mechanism for examining the interactions between transport planning and land use planning at the regional level and for promoting their integration. In this way, the development consequences of transport infrastructure proposals and the transport implications of development patterns can be considered together at the regional level.

Structure plans are prepared by county councils covering key, strategic issues best considered on a countywide basis. Structure plans provide the opportunity to assess patterns of new development, the general location of significant, individual developments and broad development constraints, within the framework of national and regional planning guidance. They should include an indication of the timescale and priorities for proposed major developments, including trunk roads.

Local transport plans are prepared by county councils to provide a coherent approach to transport provision within the county and as a financial basis for central government allocations to them for transport measures.

Local plans are produced by district councils, and set out detailed policies and specific proposals for the development and use of land. Local plans are required to be in general conformity with structure plans, which must in turn have regard to regional guidance and national policies.

19.4 Scheme Description of Section 1

19.4.1 Section 1 from York Bypass (at A1237 Hopgrove junction) to Malton Bypass (at B1248 Musley Bank Junction)

This section is described in detail earlier in this Report. Regional policy is defined in the Regional Planning Guidance for Yorkshire and the Humber (RPG12). The route begins in the area covered by the City of York Council and moves into the area covered at county level by North Yorkshire County Council and at district level by Ryedale District Council.

19.5 Identification of Impacts of Section 1

19.5.1 Section 1 from York Bypass (at A1237 Hopgrove junction) to Malton Bypass (at B1248 Musley Bank Junction)

Please see Table 1, which details those policies and plans affected, identifies impacts and assesses the magnitude of the impacts.

Broadly, the impacts upon policies and plans caused by the scheme proposals are as follows:

Positive Impacts

- Improvements leading to benefits for safety and casualty reduction.
- Improvement of inter urban routes
- Reduction of vehicle and pedestrian /cyclist conflict.
- Benefits from landscape planting due to mitigation of landscape effects.
- Noise impacts (negative impacts are also likely to be experienced, depending on location).

Negative Impacts

- Scheme passes through a Green Belt and an AONB.
- Damage to the rural character of other areas along the route.
- Damage to the built and natural environment (including archaeological sites, landscape character and ecological resource).
- Damage to agricultural land.
- Noise impacts (positive impacts are also likely to be experienced, depending on location).

19.6 Possible Mitigation Measures of Section 1

19.6.1 Section 1 from York Bypass (at A1237 Hopgrove junction) to Malton Bypass (at B1248 Musley Bank Junction)

No specific mitigation is proposed in response to impacts on policies and plans.

Impact Assessment of Section 1

Section 1 from York Bypass (at A1237 Hopgrove junction) to Malton Bypass (at B1248 Musley Bank Junction)

Impacts on relevant policies and plans are listed in Table 1 below, and are summarised thereafter:

Red = The policy is hindered
Yellow = The policy is not affected
Green = The policy is facilitated

Section 1- York bypass to Malton bypass (B1248)

Policy Ref	Policy Title	Relevant Policy Objectives	
NATIONAL LEVEL			
Planning Policy Guidance (PPG)			
PPG2		The general policies controlling development in the countryside apply with equal force in Green Belts but there is, in addition, a general presumption against inappropriate development within them. Such development should not be approved, except in very special circumstances.	The scheme is in the York City Green Belt.
REGIONAL LEVEL			
Regional Planning Guidance for Yorkshire and the Humber (RPG12) December 2004			
E6(b)	Economy - Tourism	Maintain a balance between the needs of visitors and the needs of host communities whilst protecting environmental tranquillity.	The route will not impact on this policy
E6(c)	Economy - Tourism	Ensure effective management of visitor flows and activity and encourage greater use of alternative modes of transport to the car.	
N1	Natural Environment	Promotes the protection of sites of biological importance.	Ryedale District and York City Local Plans identify these sites, some of which are close to the proposed route.
N2	Natural Environment	Promotes the protection of sites of cultural importance.	
N3	Natural Environment	Promotes the protection of sites of landscape character importance.	
P2 (a)	Regional Spatial Policy	The Green Belts in North, South and West Yorkshire have a valuable role in supporting urban renaissance and concentration, as well as conserving countryside, and their general extent should not be changed.	A section of the route passes through green belt GB1-GB5
P2 (b)	Regional Spatial Policy	More localised review of Green Belt boundaries may be necessary in some places through development plan reviews, but only if justified by exceptional local circumstances.	
R2	Regional Spatial Policy	Development Plans should adopt a sequential risk-based approach to development and flooding as defined in PPG25. To enable the risk from flooding to be appropriately managed in the region: b.i) In functional floodplains and washlands, and in undeveloped floodplain areas where the risk from tidal and fluvial flooding is high, development should be avoided. b.ii) Following application of the sequential approach, where other considerations in favour of the development, for example the significant need for economic and social regeneration and the need to recycle previously developed land) outweigh the flooding issues in identified flood risk areas, development will only be permitted where it has been established, following consultation with the Environment Agency and other relevant organisations, that any necessary protection or management measures can and will be provided and are consistent with relevant management plans (e.g. Catchment Flood Management Plans).	The scheme will affect the Environment Agency's indicative flood hazard zone.
S1	Sustainability	Local authorities and regional stakeholders are encouraged to carry out sustainability appraisals of their plans, strategies, proposals and programmes,	The scheme neither facilitates nor hinders these policies.
S6	Sustainability	Promotes the wise use of non-renewable resources.	
T2	Transport	Promotes the integration of modes of transport and access to it by all users.	
T9	Transport	General presumption against increases in the physical capacity of the highway network except where (amongst others) improvements result from Highways Agency Route Management Strategies.	The scheme does not result from an HA RMS.
COUNTY LEVEL			
North Yorkshire County Structure Plan 1995 - 2006			
A1	Agriculture and Forestry	Development which would involve the loss of agricultural land but which could reasonably be expected to take place on non-agricultural land or on agricultural land of a lower quality will be resisted. Preference will be given to the use of derelict, under-used or degraded land.	Issues relating to these policies are addressed under the Land Use – Agricultural Land

Policy Ref	Policy Title	Relevant Policy Objectives	
A2	Agriculture and Forestry	In allocating land for development and in considering proposals involving the loss of agricultural land, account will be taken of the need to:- (i) ensure that there is no greater loss of agricultural land than is necessary in order to carry out the development to a satisfactory standard; (ii) retain economically viable farm units and avoid the unnecessary severance and sub-division of farms.	heading.
A3	Agriculture and Forestry	All grade 1, 2 and 3A agricultural land and the valley bottom land in upland areas will be safeguarded as far as possible from non-agricultural development.	
E1	Environment	Gives priority to the conservation of landscapes and general amenity of [amongst others] the Howardian Hills. There will be presumption against development. High standards of design will be required. Measures will be taken to protect and enhance landscapes.	The route passes through the Howardian Hills
E2	Environment	Restricts development in the open countryside outside National Parks, Areas of Outstanding Natural Beauty and Green Belts.	The route is in Open Countryside, though a Green Belt and the Howardian Hills AONB.
E4	Environment	Buildings and areas of special townscape, architectural or historic interest will be afforded the strictest protection.	These issues are addressed under the Cultural Heritage heading.
E5	Environment	Development proposals which could result in damage to, or the destruction of, sites of archaeological importance will normally be refused.	
E6	Environment	Development will normally not be permitted within national nature reserves, local nature reserves and sites of special scientific interest or in adjoining locations where development would have an adverse effect on such sites. Special consideration will be given to other notified sites of nature conservation significance and wildlife habitats in examining proposals for development.	These issues are addressed under the Ecology and Nature Conservation headings.
E7	Environment	Development which would give rise to substantially increased levels of noise, water or air pollution or would be hazardous and significantly increase the risks to members of the public will normally not be permitted, but the expansion of existing industry or development essential to agriculture, mineral extraction and processing or other established industries in North Yorkshire may be allowed.	Issues are addressed under the Traffic Noise, Water Quality and Air Quality headings.
M8	Minerals	Non-mineral development will be restricted in order to prevent the sterilisation of unworked mineral resources or where it would not be compatible with mineral working and ancillary development.	The scheme does not impact on these policies.
R1	Leisure	Provision will be made for the development of recreational, leisure and cultural facilities in locations accessible to both public and private transport where this is not detrimental to local interests.	
T6	Transport	Within built-up areas, traffic management measures will normally be preferred to major new road construction as the means of dealing with (i) traffic congestion; (ii) delays to bus services; (iii) accident black spots; (iv) vehicle/pedestrian conflict; and (v) extraneous traffic in residential and historic areas.	The route does not pass through any significant built up areas.
T7A	Transport	The County Council's primary road network will include the following department of transport trunk road scheme:- A64 York - Malton	The scheme is identified in the Councils Policy document.
T10	Transport	Where appropriate, provision will be made for cyclists.	Will be considered as part of scheme design.
T11	Transport	As regards the needs of industry, commerce and other major development (ii) the use of the primary road network will be preferred, and unnecessary use by heavy goods traffic of unsuitable roads will be resisted.	The scheme will not impact on this policy.
T17	Transport	The standard of construction or maintenance of roads other than trunk roads in National Parks or conservation areas will reflect the overriding importance of environmental considerations in these areas.	This will be addressed as part of the overall design process.
North Yorkshire Local Transport Plan 2001 - 2006			
Objective 1		To promote social equality by providing genuine choices of travel mode...	The scheme will have no impact on travel choices.

Policy Ref	Policy Title	Relevant Policy Objectives	
Objective 2		To limit traffic growth...	The scheme is designed to improve safety and should have little or no impact on traffic growth.
Objective 3		To provide a safe, efficient and well maintained highway network...	The scheme will result in road safety improvements.
Objective 4		To minimise the adverse impact of traffic on the environment...	The use of DMRB standards will minimise environmental impacts.
Objective 5		To provide a quality public transport system...	The scheme will have no direct impact on public transport.
Objective 6		To reduce the number and severity of casualties...	The scheme will result in road safety improvements.
Objective 7		To facilitate opportunities for economic regeneration...	The scheme will have no direct impact on economic regeneration.
DISTRICT LEVEL			
Ryedale District Council Local Plan published March 2002			
AG1	Development of the best and most versatile agricultural land	In considering development proposals, due weight will be attached to the protection of the best and most versatile agricultural land. Development of grades, 1, 2 and 3A land will not be permitted unless:- (i) The development would allow the land to be restored to agriculture without significant detriment to its agricultural land quality; or (ii) The opportunities have been addressed for accommodating the proposed development within development limits and on previously developed sites in sustainable locations; or (iii) The site is included within Development Limits or is specifically allocated for development in the Local Plan. Whenever development of the best and most versatile agricultural land is permitted, this should take place on the areas of lowest grade land suitable for the development except where sustainable considerations suggest otherwise.	This issue is addressed under the Land Use – Agricultural Land heading.
C1	New development and changes of use within Conservation Areas	Within Conservation Areas, the District Council will require new development to be of a high standard of design and to respect and maintain the character and appearance of the Conservation Area. Therefore, within the Conservation Areas: (i) New development, including alterations to buildings, will be expected to respect its historic context in terms of scale, form, materials and quality; (ii) Development will not be permitted if it would generate levels of traffic, parking, noise or environmental problems which would be detrimental to the character or appearance of the area; (iii) Consideration may be given to relaxing approved policies or standards if, by doing so, a Listed Building or a building of particular townscape merit in a Conservation Area under serious threat can be retained.	These issues are addressed under the Cultural Heritage and Nature Conservation headings
C2	Demolition of buildings within Conservation Areas	Within Conservation Areas, the demolition of buildings which make a positive contribution to the character or appearance of the area will only be permitted where it can be demonstrated that:- (iii) That there is clear evidence that redevelopment would produce substantial planning benefits for the community or the character and appearance of the area that would outweigh the loss resulting from the building's demolition.	Addressed under the Cultural Heritage heading.
C3	Open spaces which contribute to the character of Conservation Areas	Planning permission for the development of any open area of land which contributes to the character of a Conservation Area will not be granted if the land; (i) Makes a significant contribution to the character or setting of the Conservation Area or is important to views into or out of the area; or (ii) Provides an attractive setting for buildings within it; or (iii) is important to the historical form and layout of the settlement.	These issues are addressed under the Cultural Heritage and Nature Conservation headings

Policy Ref	Policy Title	Relevant Policy Objectives	
C6	New Conservation Areas	The District Council will examine the following settlements to determine whether or not any areas are of sufficient special architectural or historic interest to warrant preservation or enhancement by their designation as Conservation Areas. List includes: High Hutton, Whitwell-on-the-Hill.	Both villages lie close to the scheme route.
C9	Demolition of Listed Buildings	The demolition of a Listed building will only be allowed in exceptional circumstances. Before consent is granted for the demolition of a Listed Building, applicants will be required to submit convincing evidence to show that: (i) Because of the condition of the building, it would be uneconomic to repair and maintain it; and (ii) It has been impossible to find a suitable viable alternative for use of the building; or (iii) That there is clear evidence that redevelopment would produce substantial planning benefits for the community which would decisively outweigh the loss resulting from the building's demolition.	These issues are addressed under the Cultural Heritage heading.
C10	Applications affecting the setting of Listed Buildings	The Council will not permit development which would adversely affect the setting of a Listed Building.	
C13	Archaeological investigation of sites	Where development proposals affect sites of lesser or potential archaeological importance, the District Council may request desk-top assessment or field evaluation as part of a planning application, to provide adequate assessment of the nature, extent, and importance of the remains present and the degree to which the development is likely to affect them. Where physical preservation in situ within development proposals is not possible or justified, the District Council in granting permission will require the implementation of a programme of archaeological investigation, recording and publication as part of the development scheme.	
C14	Archaeological Remains	The Council will exercise a presumption in favour of the preservation of nationally important archaeological remains and their settings, and the preservation in situ within a development of other important sites.	
C15	Historic parks and gardens	The District Council will not grant permission for any development which would have a material adverse effect on either the character or setting of an Historic Park or Garden.	
EMP10	Industry and business	Relates only to small industrial and business developments within settlements. Requires "...sufficient and safe provision..." for road traffic generated by schemes.	The scheme will result in road safety improvements.
ENV2	Howardian Hills	The natural beauty of the Howardian Hills Area of Outstanding Natural Beauty will be given the greatest possible protection and, in this area, this will be given priority in the determination of development proposals. Within the AONB:- (i) Any development which would adversely affect the natural beauty of the landscape will not be permitted; (ii) Small-scale development which would contribute to the economic and social well-being of the Howardian Hills AONB will be permitted provided that it is consistent with the protection of the natural beauty of the landscape and is compatible with AONB objectives; (iii) Small-scale tourist and outdoor sport and recreational activities which are sensitively related to the distinctive landscape character and heritage of the area will be permitted; (iv) Large-scale developments will be strongly resisted unless they are proven to be in the national interest, incapable of being located outside the AONB and designed to do as little damage to the environment as practicable; (v) Where development is permitted, it must be of the highest standard of design reflecting the traditional character of buildings in the area, using materials traditional to the area and be sited so as to integrate satisfactorily with the surrounding landscape; (vi) All proposals will be subject to a rigorous examination of their environmental implications. Wherever appropriate, proposals for development which are likely to have a significant effect on the environment within the AONB should be accompanied by an Environmental Impact Assessment.	The route passes through the Howardian Hills from approximately Whitwell on the Hill to Low Hutton Lane.
ENV3	Development in the Areas of High Landscape	Within the Wolds and the Fringe of the moors Areas of High Landscape Value:-	Neither area is close to the route.

Policy Ref	Policy Title	Relevant Policy Objectives	
	Value		
ENV4	River and stream corridors	<p>The District Council will normally resist development which would have a material detrimental impact on the natural features of river and stream corridors within the Plan area. In particular, the District Council will, in consultation with the Environment Agency (and, where appropriate, the relevant Internal Drainage Board, seek to conserve and enhance the environmental and amenity value of these corridors by:-</p> <ul style="list-style-type: none"> (i) Protecting existing natural features and marginal vegetation; (ii) Resisting, unless absolutely essential, proposals to divert, culvert, straighten or otherwise modify river and stream channels; (iii) Resisting development that would directly or indirectly have a material adverse impact on their character, archaeological or historic interest and their amenity or landscape value; (iv) Requiring that the design of structures and engineering works is appropriate in form and scale to their setting; (v) Promoting the maintenance, enhancement and, in appropriate situations, the restoration of the wooded character, marginal vegetation and other natural features of river and stream courses; (vi) Requiring the retention of a buffer strip between the watercourse and the development when it is considered otherwise acceptable to allow development within a river and stream corridor. Such areas should be of sufficient width and character to protect the visual, ecological, amenity, historical and engineering interests. Where appropriate, the District Council will also seek the retention of buffer strips between watercourses and significant areas of dense new planting; (vii) Resisting proposals which would not accord with the nature conservation policies of the Local Plan. <p>Development which would not accord with the above criteria will only be permitted when it can be clearly demonstrated that the economic or social benefits of the proposal would outweigh</p>	Addressed under the Landscape effects and the Water Quality and Drainage headings.
ENV5	Visually Important Underdeveloped Area	<p>Proposals to develop upon any Visually Important Underdeveloped Area defined on the Proposals Map will not be permitted except where:-</p> <ul style="list-style-type: none"> (i) The economic and social benefits of the development would significantly outweigh the loss or damage to the character of the area, or (ii) The development would not have a material adverse effect upon the character or appearance of the area. 	The site does not lie close to any Visually Important Underdeveloped Area.
ENV6	Tree preservation Orders	<p>The District Council will make Tree Preservation Orders on individual trees, groups of trees, or woodlands which are important to the local landscape or streetscene for their amenity and scenic value, or which make an important environmental contribution. When determining applications to fell or to carry out other works to trees subject to Tree Preservation Orders, the Council will take into account the health and stability of the trees, their likely lifespan and the continuing contribution of the trees to public amenity. An arboriculturist's report will normally be required.</p>	These issue are addressed under the Landscape Effects heading.

Policy Ref	Policy Title	Relevant Policy Objectives	
ENV 7	Landscaping	<p>Wherever appropriate, development proposals will be required to incorporate a suitable high-quality landscaping scheme that enhances and complements the local environment. Such schemes should normally use native, locally-occurring species. Detailed permission will not be granted in advance of the submission of a suitable landscaping scheme, where required, and where appropriate, development will not be permitted until the appropriate landscaping has been undertaken. Landscaping proposals must not materially detract from the value of areas of archaeological or ecological importance. Existing trees and hedgerows will normally be required to be retained and should be incorporated into the design of new developments. Applications for development on sites with existing trees and hedgerows should be accompanied by the following details:-</p> <ul style="list-style-type: none"> (i) An accurate tree and hedge survey indicating the positions, species and spreads of all trees and hedges within and surrounding the site (normally at 1:2000 scale); (ii) An accurate survey of the topography indicating existing and proposed changes in ground level; (iii) The location of proposed and repositioned underground services in relation to existing trees and hedges; (iv) Details of tree and hedge protection measures during construction. <p>Applications for development on sites which contain trees or hedgerows of significant amenity value will be required to be accompanied by a 'Method Statement' for arboricultural works.</p> <p>Proposals to remove existing trees or hedges will only be permitted if they represent a material threat to public safety or property, are diseased or dying, involve a species which is detrimental to landscape quality or where the benefits of the development would clearly outweigh the importance of the trees and hedges on the site. Veteran trees which provide an important habitat should be retained in appropriate undeveloped areas of the site. Where it is appropriate to remove a tree or hedgerow, the District Council will require the planting of sufficient replacements to compensate for the detrimental effect on the landscape, wildlife and on atmospheric quality.</p>	Will be incorporated into the scheme design.
		<p>The District Council will monitor the implementation of agreed schemes and the well-being of all new and replacement planting and will, in appropriate circumstances, take action to ensure the implementation of outstanding schemes and also the replacement of any unsuccessful specimens.</p> <p>In some cases, off-site landscaping may be required as an alternative to, or in conjunction with on-site landscaping.</p>	

Policy Ref	Policy Title	Relevant Policy Objectives	
ENV8	Environmental Impact Assessment	<p>In order to make a full assessment of projects likely to have a major effect on the environment the District Council will require an Environmental Impact Assessment to be submitted for:-</p> <p>(i) All Schedule 1 Projects*</p> <p>(ii) Any Schedule 2 Projects* which by virtue of their nature, size or location, would be likely to have a significant effect on the environment. Particular regard will be paid to the likely effects of proposals on the Howardian Hills AONB, SSSIs, SINC's and other important nature conservation sites. Conservation Areas and historic town centres, Scheduled Monuments and areas containing a significant number of dwellings.</p> <p>* As defined by the Town and Country Planning (Environmental Impact Assessment) Regulations 1999.</p> <p>In addition to the habitat linked to the Character Areas of Ryedale, other general habitat types are of particular importance, both in their own rights and as part of a network of sites and features across Ryedale and beyond. These include disused quarries such as Wharram Quarry and Wilton Heights Quarry which often provide a range of conditions including hugely valuable areas of scree. In addition, ponds have been shown to be lost at significant rates (a 1994 survey showed around a third of marked ponds to be filled in or dried up) in parts of Ryedale. Historic parklands with their veteran trees and many hedgerows and small copses can be vital to ensuring the maintenance of the current range and diversity of our flora, fauna, geological and landform features and the survival of important species.</p> <p>The nature conservation policies have the following main objectives:-</p> <p>To protect, maintain and wherever possible, enhance bio-diversity in Ryedale and beyond.</p> <p>To protect and, wherever possible, enhance sites and features of particular wildlife and geological value particularly where they provide a habitat for a protected species of special conservation concern and/or provide a landscape feature.</p> <p>To create appropriate new habitat and to implement measures to enhance public awareness, understanding and enjoyment of nature conservation and geology.</p>	This report is part of the Environmental Impact process
ENV10	Site of Special Scientific Interest (SSSI), National Nature Reserve (NNR) or a Geological Conservation Review (GCR) or a Nature Conservation Review (NCR) sites.	<p>Proposals for development within or likely to affect a designated or proposed Site of Special Scientific Interest will be subject to special scrutiny. Where such development may have a detrimental effect, either directly or indirectly, on the SSSI, and all damage could not be prevented through the use of conditions or planning obligations, the development will not be permitted unless the benefits of the development would clearly outweigh the national importance of the site and the national policy to safeguard the intrinsic nature conservation value of the national network of such sites and it can be demonstrated that no suitable alternative site is available for the development. Particular regard will be paid to the national importance of sites which are a National Nature Reserve (NNR) or a Geological Conservation Review (GCR) or a Nature Conservation Review (NCR) site.</p> <p>Conditions and planning obligations will be used:-</p> <p>(i) Where they would allow development to proceed without causing damage to an SSSI; or</p> <p>(ii) To limit and to require compensatory measures for the detrimental effects of development which is permitted because its benefits clearly outweigh the value of the SSSI.</p>	Sites related to ENV10 and ENV11 and close to the route are identified on the Proposals Map.

Policy Ref	Policy Title	Relevant Policy Objectives	
ENV11	Internationally Important Nature Conservation Sites	Proposals for development or land use which may affect a European site, a proposed European site or a RAMSAR site will be subject to the most rigorous examination. Development or land use change not directly connected with or necessary to the management of the site and which is likely to have a detrimental effect on the site (either individually or in combination with other plans or projects) will not be permitted unless it can be clearly demonstrated that:- (i) there is no alternative solution; and (ii) there are imperative reasons of over-riding public interest for the development or land use change that clearly outweigh the international importance of the site. Where the site concerned hosts a priority natural habitat type and/or priority species, development or land use change will not be permitted unless the authority is satisfied that it is necessary, for reasons of human health or public safety or for beneficial consequences or primary importance for nature conservation. Where development does not proceed that would be detrimental to a Natura 2000 site, the District Council will use conditions and/or planning obligations to secure all compensatory measures necessary to ensure that the overall coherence of Natura 2000 is protected.	
ENV12	Nature Conservation	Proposals for development that would have a material direct or indirect detrimental effect on a Site of Importance for Nature Conservation or a Local Nature Reserve will only be approved:- (i) Where conditions and/or planning obligations can be used to prevent material damage to the value of the site; or (ii) Where it can be demonstrated that the benefits of the development clearly outweigh the significant importance of the site and that no suitable alternative site is available. In such cases, the District Council will use conditions and/or planning obligations to ensure that damage to the site is kept to an absolute minimum and that appropriate compensatory habitat creation and/or enhancement measures are carried out on or close to the site.	The Proposals Map identifies sites close to the route.
ENV13	Regionally Important Geological/ Geomorphological Sites	The District Council will aim to avoid detrimental effects of development proposals on Regionally Important Geological/Geomorphological Sites (RIGS) by use of planning for the creation of new exposures. Where it is not possible to avoid material damage to the value of a RIGS, the District Council will only grant permission if it can be clearly demonstrated that:- (i) The benefits of the development outweigh the value of the site; and (ii) There are no suitable alternative sites available for the development; and (iii) The damage to the value of the site will be kept to an absolute minimum.	Addressed under the Cultural Heritage heading.
ENV14	Semi-natural habitats	Development that would materially detract from the ecological or landscape value of semi-natural habitats* will only be permitted where it can be demonstrated that the benefits of the development would clearly outweigh the importance of the site or feature. Where development that would materially damage the value of the site is permitted, such damage must be kept to an absolute minimum and appropriate habitat creation and enhancement measures will be required on or near the site. *Otherwise undesignated ancient woodlands, unimproved and semi-improved grassland, wetlands (including fens, mires, bog and flushes) low land heath and important hedgerows and verges.	Issues are addressed under the Ecology and Nature Conservation heading.
ENV15	Plant and animal species protected by law	Development will not be permitted which would have a direct or indirect detrimental effect on an animal or plant species protected by law. However, where appropriate, conditions and/or planning obligations will be used where this would allow development to take place without detrimentally affecting such species.	
ENV16	Species of Special Conservation Concern	Development that would directly or indirectly have a materially detrimental effect on a Species of Special Conservation Concern will only be permitted where it can be demonstrated that the benefits of the development clearly outweigh the need to safeguard that species. Wherever appropriate, conditions and/or planning obligations will be used to minimise detrimental effects of development on Species of Special Conservation Concern and to require relevant habitat creation and/or enhancement measures on or close to affected sites.	

Policy Ref	Policy Title	Relevant Policy Objectives	
ENV18	Ponds	Development that would materially detract from the ecological, historical or landscape value of any important pond will only be permitted where it can be demonstrated that the benefits of the proposal would clearly outweigh the importance of the pond. Where such development is permitted, conditions and/or planning obligations will be used to minimise the damage and to ensure that where appropriate, habitat creation and/or enhancement measures are implemented on or close to the site.	
ENV19	Wildlife Corridors	Development that would normally be materially detrimental to a countryside feature which acts as a wildlife corridor will only be permitted where it can be demonstrated that the benefits of the development would clearly outweigh the resultant detriment to local wildlife and to the value of that feature as a wildlife corridor. In such cases, conditions and/or planning obligations will be used to minimise damage and to ensure habitat enhancement and/or creation is carried out on or close to the site wherever appropriate.	
ENV20	Habitat creation and public access to nature conservation sites	The District Council will support appropriate proposals which would increase the number, size and diversity of sites of nature conservation importance, and new development should include measures to achieve this aim wherever possible. Appropriate proposals to enhance public awareness and enjoyment of nature conservation sites and features will be supported where existing features of biological or geological importance will not be adversely affected.	
ENV21	Pollution Control	Proposed development with the potential to pollute will not be permitted where, in the view of the District Council, any likely pollution will have an unacceptable impact which cannot be overcome by planning conditions or legal agreements. In considering proposals the Council will take into account:- (i) The impact on the health, safety and amenity of the general public; (ii) The impact on neighbouring land and other land uses; (iii) The impact on other Policies and proposals of the plan; (iv) The impact on the natural environment; (v) The advice of the pollution control agencies; (vi) The restoration of the site when the use has ceased (where appropriate).	The use of current design standards is likely to result in improvements or at worst no change concerning these issues. The Water Quality and Drainage Section has more detail of these issues.
ENV22	Water Quality	Development will not be permitted which, in the opinion of the District Council after consultation with the Environment Agency, would unacceptably prejudice the quality of surface or ground water. The District Council will generally support initiatives which would lead to improvements in surface or ground water quality.	
ENV23	Air Quality	Development which would have a significant adverse effect on air quality will not be permitted. Where appropriate, the District Council will require suitable measures to be taken in new development to prevent any risk to public health from the release of airborne pollutants.	This issue is addressed under the Air Quality heading.
ENV24	Noise-generating development	Development which would cause unacceptable levels of noise disturbance will not be permitted. In particular, development will be resisted which would lead to unacceptable levels of noise disturbance problems through the introduction of a noise-generating development into a noise-sensitive area or through the introduction of noise-sensitive development into an area of high noise levels. Where noise problems can be overcome using mitigation measures, these will be enforced through appropriate planning conditions and/or legal agreements.	Noise impacts are addressed under the Traffic Noise and Vibration heading
ENV25	Development and Flood Risk	In order to minimise flood risk, proposals for development will be assessed against:- <ul style="list-style-type: none"> · the advice of the Environment Agency; · the level of actual risk involved; · the need for urban regeneration and the redevelopment of previously developed land; and · the following criteria:- <p>A In areas with a high risk of flooding*, new development, including proposals which involve the raising of land, will only be permitted where:-</p> <p>(i) In the case of areas that are considered by the Environment Agency to act as functional flood plain, there would be no development except for essential transport and utilities infrastructure which could not be located in an area of lower risk. Where, exceptionally, such development is permitted this will be subject to satisfactory design and compensatory flood storage measures;</p>	Scheme design and mitigation measures for all options will result in very small impacts, if any, on flood risk. Areas liable to flooding are identified on the Proposals Map.

Policy Ref	Policy Title	Relevant Policy Objectives	
		<p>(ii) In the case of areas within development limits, new development will be permitted provided that flood defences to the appropriate standard for the proposed development are available or will be provided. In such cases, the proposed buildings and layout should be adequately designed to resist flooding. Development will only be permitted where it would not increase the risk of flooding elsewhere, and the proposal includes, where necessary, the provision of adequate compensation measures to prevent this occurring.</p> <p>(iii) In all other high risk areas outside development limits, proposals which involve general purpose housing and residential or institutional accommodation will not be permitted. Job-related residential development and commercial and industrial proposals will only be permitted where that location is essential and there are no alternatives in areas of lower risk. Where, exceptionally, development is permitted this will be subject to the provision of satisfactory flood prevention measures and associated compensatory flood storage measures.</p> <p>B Developers will be required to fully fund the provision and future maintenance of flood mitigation and defence measures required as a result of their proposals, including any consequent works to prevent additional flood risk to other properties. Any flood protection or mitigation measure should not have any material adverse effect upon the nature conservation value of the area or detract from the character or setting of nearby settlements or Listed Buildings or sites of archaeological value.</p> <p>C A Flood Impact Assessment, prepared in consultation with the Environment Agency, will be required to be submitted with any planning application that is within an area considered to be at risk from flooding or that would materially increase the risk of flooding through run-off.</p> <p>D Development that would increase the risk of flooding through altered surface water run-off must include adequate measures to prevent this. Wherever appropriate, new development should incorporate a sustainable drainage system in order to manage water run-off rates and so assist with the prevention of flooding.</p> <p>The 'approximate extent of the area liable to flood' in the Plan area is shown on the Proposals map and accompanying insets. This represents the area of high risk i.e. with an annual probability of flooding of 1% or greater. However, this information is indicative and is liable to change. For detailed information on areas at risk from flooding, including the location and extent of functional flood plains, consult the Environment Agency.</p>	
ENV29	Light pollution	<p>Proposals which involve outdoor lighting schemes should normally submit details of such schemes as part of the planning application. Outdoor lighting schemes should represent the minimum level required for security and working purposes and should be designed to minimise glare and spillage. The District Council will normally resist outdoor lighting schemes that would seriously detract from:</p> <p>(i) The generally unlit rural character of a landscape; or (ii) Residential amenity; or (iii) Highway safety.</p>	If appropriate this issue will be addressed as part of the design process.
GB3	Scale, location and design of buildings within the Green Belt	<p>Planning permission for development listed in Policy GB2 will only be granted where it can be shown that the scale, location and design of such development would not:-</p> <p>(i) Detract from the open character of the Green Belt, or (ii) Adversely affect the visual amenities of the Green Belt, or (iii) Conflict with the purposes of including land within the Green Belt.</p>	The route passes though Green Belt ref:GB1-GB5
H7	Housing	Relates only to residential developments.	This policy is not affected by the scheme.

Policy Ref	Policy Title	Relevant Policy Objectives	
L6	New Public Open Space	The District Council will safeguard the following areas from development likely to prejudice their potential future use as a public open space. During the Plan period, the District Council will seek to secure these areas as public open space:- (i) The land alongside the River Derwent, Malton and Norton (Inset Map 3), (ii) The area north of Beck Isle Museum, Pickering (Inset Map 4), (iii) Land alongside Pickering Beck south of Vivis Bridge, Pickering (Inset Map 4).	None close to the route are identified on the Proposals Map.
L7	Public Open Space	Development which would be likely to result in the loss of, or have an adverse effect upon, any area of public open space or other informal open area defined on the Proposals Map will not be permitted.	
L8	Allotments	Planning permission will not be granted for any development which would result in the total or partial loss of existing allotments as defined on the Proposals Map.	
TM1	Tourism	Relates only to developments of hotels, guest houses and other visitor accommodation within settlements.	These policy areas are not affected by the scheme.
T1	Transport	Outside the Howardian Hills AONB, the District Council will only support proposals for new roads and other improvements to the road network which:- (i) Improve highway safety and/or bring about a net environmental and economic benefit; (ii) Produce environmental and/or safety benefits which could not reasonably be achieved through traffic management measures alone; (iii) Minimise adverse effects on residential amenities, settlements and their setting and the character and appearance of the countryside; (iv) Avoid, where possible, the best and most versatile agricultural land and the unnecessary fragmentation of farms; (v) Have no material adverse impact on sites of nature conservation value, archaeological or historic importance, or any other sites protected for their special qualities through the policies of this Plan; (vi) Incorporate an integral and extensive landscape scheme to maintain and, wherever possible, improve environmental standards; (vii) Minimise adverse effects on public rights of way and ensure that the needs of those travelling by means other than the private motor vehicle are not materially adversely affected and, wherever possible, are improved by the proposal; (viii) Be routed so as to minimise pressure for new development; (ix) Incorporate suitable road-crossing measures for wildlife where necessary. Where appropriate, a formal Environmental Impact Assessment will be requested in order to fully assess the proposal.	The scheme will result in safety benefits, and environmental impacts will mostly be mitigated by detailed design. However, taken overall the impact of all the scheme on this policy will be neutral.
T2	Transport	Within the Howardian Hills AONB, the District Council will, as the determining Authority or in its role as consultee:- (i) Strongly oppose new trunk and primary roads; (ii) Carefully examine new proposals to widen or alter existing roads or to create minor access roads to ensure that they: are necessary; would not lead to significant increases in speed or traffic flow; would not materially adversely affect the needs of those travelling by means other than the private motor vehicle; and would minimise damage to the environment; (iii) Seek to retain the irregular pattern and the character of the minor road network. Proposals for new trunk or primary roads outside the AONB will be opposed where they would significantly detract from the setting of the Howardian Hills AONB.	The route passes through the Howardian Hills.

Policy Ref	Policy Title	Relevant Policy Objectives	
T5	Transport	Within new development, the use of innovative road layouts and highway designs that reflect the historical character of the area will generally be supported where appropriate and where compatible with road safety considerations.	The scheme design will be developed in accordance with DMRB. This policy relates principally to road layouts within new domestic or industrial developments. In the case of a major road fewer opportunities arise for innovative road layouts.
T8	Public transport and rail services	The District Council will continue to encourage and support proposals for improvements to public transport and rail services in the Plan area. To this end the District Council will:- (iv) Ensure that, where practicable, provision is made in the layout and design of major new developments for the easy access of public transport services in order that the new development can be conveniently assimilated into the local public transport network.	The scheme will not directly impact on Public transport policy.
T9	Transport	The District Council will seek to improve the safety, convenience and attractiveness of cycling by:- (i) Ensuring, where appropriate, that new developments include appropriate measures to make access by cycling, both within the development itself and to the surrounding road and cycle network, safe and convenient; (ii) Investigating, in conjunction with North Yorkshire County Council, the preparation of Cycle Studies of the Market Towns and rural areas, to form the basis of Cycling Plans for these areas. These Plans will set out detailed proposals to enhance local cycling facilities and, where appropriate, give an increased priority to cyclists on the existing road network. New routes and/or improved facilities between settlements will also be pursued, together with the establishment of links to the National Cycle Network.	Will be addressed during the design process.
T10	Transport	The District Council will seek to ensure improvements in the safety, convenience and attractiveness of facilities for pedestrians and in the Public Rights of Way network by:- (i) Where appropriate, requiring new development to include pedestrian facilities which link to the surrounding Rights of Way network and with routes to local centres and public transport facilities; (ii) Ensuring that all new pedestrian facilities are designed to encourage walking and to be both safe and convenient; (iii) In conjunction with North Yorkshire County Council, investigating the possibility of improving existing and creating new facilities for pedestrians, including, where appropriate, combined walking/cycling/horse-riding routes; (iv) Ensuring that existing public footpaths and bridleways and the enjoyment of them will not be adversely affected by new development, particularly where the Right of Way forms part of a designated National Trail, and that where diversions of Public Rights of Way are proposed, these will only be supported where the alternative route will be equally pleasant and convenient; (v) Ensuring, wherever appropriate, that adequate provision is made for people with disabilities.	All existing pedestrian facilities will be maintained.
T11	Disused railway lines	On the disused railway lines identified on the Proposals Map, development which would prejudice their future use as possible cycle/footpath/horse riding routes or for potential public transport use will not be permitted. The District Council will encourage assessment of the use, where practicable, of these disused railway lines for the creation of new routes for cyclists, walkers and horse riders and, in the longer term, for their use by public transport. Proposals which would be materially detrimental to wildlife will not be advanced.	No disused railway lines affected by the scheme

Policy Ref	Policy Title	Relevant Policy Objectives	
U3	Surface Water	The District Council will not permit any development which would result in an adverse impact on the water environment due to additional surface water run-off. Development which would increase the risk of flooding must include appropriate attenuation or mitigation measures, including restoration of the floodplain, as defined by the Council in consultation with the Environment Agency and, where appropriate, the relevant Internal Drainage Board. These works must be funded by the developer. Developers will also be expected to cover the costs of assessing surface water drainage impacts and of any appropriate mitigation works, including their long-term monitoring and management. Wherever appropriate, the District Council will strongly support the use of sustainable drainage systems.	All appropriate mitigation measures will be incorporated within the scheme design.

York City Local Plan (Draft 1998, 1 – 3 amends)			
E3b	Existing and Proposed Employment Sites	The standard employment sites identified in schedule 2, and any other sites or premises either currently or previously in employment use, will be retained within their current use class. Planning permission for other uses will only be given where:- (a) there is a sufficient supply of employment land to meet both immediate and longer term requirements over the plan period; and (b) unacceptable environmental problems exist; or (c) the development of the site for other appropriate uses will led to significant benefits to the local economy; or (d) the use is ancillary to an employment use.	No sites within corridor
E4	Employment Development On Unallocated Land	Within defined settlement limits, planning permission will be granted for employment use of a scale and design appropriate to the locality where:- (a) the site is vacant, derelict or underused; or (b) it involves infilling, extension, redevelopment or conversion of existing buildings.	The route will not impact on this policy
GB1	Development in the Green Belt	Within the Green Belt, planning permission for development will only be granted where; (a) the scale, location and design of such development would not detract from the open character of the Green Belt; and (b) it would not conflict with the purposes of including land within the Green Belt; and (c) it would not prejudice the setting and special character of the City of York; AND it is for one of the following purposes:- Agriculture and forestry; or Essential facilities for outdoor sport and outdoor recreation; or Cemeteries; or Limited extension, alteration or replacement of existing dwellings; or Limited infilling in existing settlements; or Limited affordable housing for proven local needs; or Limited infilling or redevelopment of existing major developed sites	The route passes through York Green Belt
GP4a	Sustainability	Proposals for all development should have regard to the principles of sustainable development as summarised in criteria below. (d) conserve and enhance the local character and distinctiveness of the city, and be of a high quality design; (e) conserve natural resources, especially non-renewable resources such as wildlife, soil, fossil fuels, minerals, water and energy; and (f) minimise pollution, including air, water, land, light noise and to ensure any waste generated is managed safely and sustainability.	These issues will be addressed by the Water Quality and Drainage, Traffic Noise headings and as part of the design process.
GP4b	Air Quality	Proposals for development in an AQMA (Air Quality Management Area) are required to assess their impact on air quality. Proposals for development outside an AQMA will be required to assess their impact on air quality.	This issue is addressed under the Air Quality heading.
GP6	Contaminated Land	Full planning permission will not be granted on or adjacent to, land which may have been contaminated by a previous use must include evidence that the possibility of contamination has been investigated and proposals for dealing with any contamination are included.	No contaminated sites have been identified close to the route. If appropriate will be dealt with as part of the design process.

GP7	Open Space	The development of land designated as open space on the Proposals Map, or any other areas of open space that are provided in conjunction with a planning permission during the Plan period, will only be permitted where:- (a) there will be no detrimental effect on local amenity or nature conservation; and (b) compensatory provision of an equivalent size and standard is provided by the applicant in the immediate vicinity of the site proposed for development.	Addressed under the Nature Conservation and Landscape Effects heading
GP9	Landscaping	Where appropriate development proposals will be required to incorporate a suitable landscaping scheme, and this must:- (a) be planned as an integral part of the proposals; and (b) include an appropriate range of indigenous species; and (c) reflect the character of the locality and surrounding development; and (d) form a long term edge to developments adjoining or in open countryside. Where appropriate applicants will be expected to sign an agreement under Section 106 of the Town and Country Planning Act 1990 to ensure the long term maintenance of landscaping.	
GP11	Accessibility	In order to achieve satisfactory access to new development and the new or existing open spaces and landscaped areas associated with them, planning applications will be required to demonstrate that suitable provision will be made for access and facilities for people with mobility problems sensory impairment and carers with children, including parking facilities and pedestrian routes to and from those parking facilities.	The scheme will not impact on this policy
GP24 a	Land Reserved for Possible Future Development	Until such time as the Local Plan is reviewed, planning permission on sites designated as reserved land.	No areas on current list with corridor.
HE2	Development in Historic Locations	Within or adjoining conservation areas, and in locations which affect the setting of listed buildings, schedule monuments or nationally important archaeological remains (whether scheduled or note), development proposals must respect adjacent buildings, open spaces, landmarks and settings and have regard to local scale, proportion, detail and materials.	Addressed under the Nature Conservation and Cultural Heritage headings.
HE3	Conservation Areas	Within conservation areas, proposals for the following types of development will only be permitted where there is no adverse effect on the character and appearance of the area:- Demolition of a building (whether listed or not); External alterations; Changes of use which are likely to generate environmental or traffic problems; Applications for development in conservation areas will only be considered if full design details are included.	
HE4	Listed Buildings	With regard to listed buildings, consent will only be granted for the following types of development where there is not adverse effect on the character, appearance or setting of the building:- Development in the immediate vicinity of listed buildings; Demolition; Internal or external alterations; Change of use Erection of satellite antenna.	Addressed under the Cultural Heritage headings.
HE5	Demolition of Listed Buildings and Buildings in Conservation Areas	Listed building consent and/or conservation area consent will not be granted for the demolition of listed buildings or buildings which positively contribute to the character or appearance of conservation areas.	
HE10	Archaeology	Planning applications for development that involves disturbance of existing ground levels on sites within York City Centre Area of Archaeological importance will be granted provided:- (a) applicants permit a field evaluation, approved by the Council, to assess the extent and importance of any archaeological remains; and (b) applicants can demonstrate that less than 5% of any archaeological deposits will be disturbed or destroyed,	
HE11	Trees and Landscape	Existing trees and landscape which are part of the setting of conservation areas, listed buildings and scheduled monuments, will be required to be retained, and provision made for planting within new development, where appropriate.	This is addressed under the Landscape Effects heading.
HE12	Historic Parks & Gardens	Proposals affecting historic parks & gardens will be permitted providing they have no adverse effect on the character, appearance, amenity, setting or enjoyment of the park / garden.	Addressed under the Landscape Effects and Cultural Heritage headings.

L1b	Loss of Local Leisure Facilities	Planning permission will only be granted for a change of use that would result in the loss of a local leisure facility where it can be demonstrated that:- (a) a local need for the leisure facility no longer exists; or (b) appropriate alternative facilities exist within the local area.	This issue addressed under the Community Effects heading.
L4	Development Adjacent to Rivers	Planning permission will only be granted for development adjacent to rivers where:- (a) there would be no loss to established and thriving recreational interests and uses; and (d) existing walkways and cycleways along the river banks are retained, and where possible enhanced, as part of the proposed development.	Issues addressed under the Landscape Effects heading.
NE1	Trees, Woodlands and Hedgerows	Trees, woodlands and hedgerows, which are of landscape, amenity, nature conservation or historical value, will be protected by:- (a) refusing development proposals which will result in their loss or damage; and (b) requiring trees or hedgerows which are being retained on development sites to be adequately protected during any site works; and (c) making tree preservation orders for individual trees and groups of trees which contribute to the landscape or local amenity; and (d) making hedgerow retention notice where appropriate to protect important hedgerows and; (e) ensuring the continuation of green/wildlife corridors.	
NE2	River and Stream Corridors, Ponds and Wetland Habitats	Development which is likely to have a detrimental impact on the natural features of river and stream corridors, ponds or wetland habitats will not be permitted. Their environmental and amenity value will be conserved and enhanced by: (a) protecting existing natural features and marginal vegetation and encouraging their reinstatement when lost; (b) resisting development that would have an adverse impact on their landscape character; (c) promoting the maintenance, enhancement and, where appropriate, the restoration of their character; (d) ensuring the design of structures and engineering works are appropriate in form and scale to their setting.	Addressed under the Ecology and Nature Conservation, Water Quality and Drainage headings.
NE3	Water Protection	When determining planning applications, account will be taken of any impact the development will have on watercourses, open water or underground water supplies. Development proposals will be expected to minimise any adverse effects on these sources.	
NE4a	International and National Nature Conservation Sites	Development which is likely to have a significant effect on a European site, proposed European site or a Ramsar site will be subject to the most rigorous examination, in accordance with the procedures set out in the Habitats Regulations 1994. Development in or likely to have an effect on a Site of Special Scientific Interest will be subject to special scrutiny.	Strensall Common is on the boundary of the route corridor.
NE5a	Local Nature Conservation Sites	Development likely to have an adverse effect on a Local Nature Reserve or a non statutory nature conservation site will only be permitted where the reasons for the development clearly outweigh the substantive conservation value of the site.	Will be addressed under the Ecological and Nature Conservation heading.
NE5b	Avoidance of Mitigation and Compensation for Harm to Designated Nature Conservation Sites	In exceptional circumstances where development is allowed under Policies NE4a and NE5a, which would have an adverse effect on the nature conservation value of the site, the appropriate use of planning conditions and planning obligations will be considered in order to protect and enhance the site's nature conservation interest and to provide appropriate compensatory measures and site management.	Will be addressed under the Ecological and Nature Conservation heading and as part of the design process, if applicable.
NE6	Species Protected by Law	Where a proposal may have a significant effect on protected species or habitats, applicants will be expected to undertake an appropriate assessment demonstrating their proposed mitigation measures.	Addressed under the Ecological and Nature Conservation headings.
NE7	Habitat Protection and Creation	Development proposals will be required to retain important natural habitats and, where possible, include measures to enhance or supplement these and to promote public awareness and enjoyment of them. Within new developments measures to encourage the establishment of new habitats should be included as part of the overall scheme.	Addressed under the Ecology and Nature Conservation headings.

NE8	Green Corridors	Planning permission will not be granted for development, which would destroy or impair the integrity of green corridors (e.g. river corridors, roads, railway lines, cycleways, etc.)	The existing route could be defined as a green corridor, any issues arising from changes to alignment would be addressed as part of the design process. Other issues would be included under the Nature Conservation and Community effects headings.
SP3	Safeguarding the Character of York	Planning permission will be granted where development:- (b) does not have an adverse impact on the open countryside and open character of the York Green Belt and green wedges running into the City.	The route will not impact on this policy.
T2	Cycle / Pedestrian Network	Planning permission will not be granted for any development that would prevent the use of any part of the existing or proposed cycle and pedestrian networks or other rights of way unless safe alternative routes will be provided that are similar or better in quality, length, convenience and safety.	If appropriate, would be addressed as part of the design process.
T5	Traffic and Pedestrian Safety	Where appropriate, traffic and pedestrian safety measures will be implemented on the highway network, particularly in residential areas, and near schools, to improve road safety for pedestrians and cyclists, reduce vehicle speeds and enhance the street environment.	
T6	Park and Ride	Proposals for park and ride will be approved providing that the site:- (a) is well related to the York Outer Ring Road (A64/A1237)	The scheme will have no direct impact on this policy.
T18	Highways	Increases to existing road capacity will only be supported if:- (a) they are absolutely necessary to overcome existing congestion levels; or (b) they facilitate the Council's economic programme; or (c) they open up vacant land for development; or (d) they remove traffic from environmentally sensitive areas; or (e) they improve road safety; or (f) they reduce conflicts between vehicle and pedestrian/cyclists; and (g) they incorporate public transport facilities; and (h) after careful evaluation of the environmental costs and benefits the scheme will result in tangible environmental benefits. In considering the design of new roads, the needs of pedestrian and cyclists must be taken into account.	Scheme offers opportunities to improve road safety and reduce conflict between vehicle and pedestrian/cyclists.
V1	Visitor Related Development	Visitor related development will be encouraged. In determining applications account will be taken of whether the proposal:- (a) had made adequate servicing arrangements; (b) is accessible to public transport routes; (c) will result in increased traffic, parking, cycles and pedestrian movement on the public highway and pedestrian / cycle routes; (d) is likely to improve the prosperity of the tourism industry and the City's economy; (e) will adversely impact on the reasonable use and enjoyment of adjacent buildings and land; (f) adversely impacts on the countryside setting of the City.	The scheme will have no direct impact on this policy.

Table 1 - Schedule of Impacts on Policies and Plans

Section 1 from York Bypass (at A1237 Hopgrove junction) to Malton Bypass (at B1248 Musley Bank Junction)

Impacts of the Scheme

The scheme facilitates 5 policies and hinders 18 (of these 18, 6 relate to Green Belts and 3 to The Howardian Hills, catering to differing aspects and levels of administration). Impacts on other policies are neutral.

19.7 Summary of Section 1

19.7.1 Section 1 from York Bypass (at A1237 Hopgrove junction) to Malton Bypass (at B1248 Musley Bank Junction)

Policies facilitated by the scheme are related to the highway network, road safety and modal conflict. Those hindered relate to environmental and conservation issues.

19.7.2 Limitations and Assumptions of Section 1 from York Bypass (at A1237 Hopgrove junction) to Malton Bypass (at B1248 Musley Bank Junction).

Please see paragraph 2.3.6 above.

Potential Further Mitigation of Section 1 from York Bypass (at A1237 Hopgrove junction) to Malton Bypass (at B1248 Musley Bank Junction)

No further mitigation is thought appropriate in relation to scheme impacts on policies and plans

19.8 The Base Line Conditions of Section 2

19.8.1 The Base Line Conditions Section 2 from Malton Bypass (at Brambling Fields) to Seamer Bypass (at Seamer Carr)

For the purpose of this study a 1 kilometre corridor either side of the proposed routes is being assessed.

National, Regional, County or District level policies will be included.

19.8.2 The Legislative Framework Section 2 from Malton Bypass (at Brambling Fields) to Seamer Bypass (at Seamer Carr)

Planning guidance and policy statements at a National, regional and local level used in this study are outlined in more detail in 19.2.3 and include:

- Regional Planning guidance
- Structure Plans
- Local Transport Plans and
- Local Plans.

19.9 Scheme Description of Section 2

19.9.1 Section 2 from Malton Bypass (at Brambling Fields) to Seamer Bypass (at Seamer Carr)

This section is described in detail earlier in this Report. Regional policy is defined in the Regional Planning Guidance for Yorkshire and the Humber (RPG12). The routes for the whole stretch are covered at county level by North Yorkshire County Council and at district level begin in Ryedale District Council area and move into Scarborough Borough Council area.

19.10 Identification of Impacts of Section 2

19.10.1 Section 2 from Malton Bypass (at Brambling Fields) to Seamer Bypass (at Seamer Carr)

Please see Table 2 in Section 13 (below), which details those policies and plans affected, identifies impacts and assesses the magnitude of the impacts.

Broadly, the impacts upon policies and plans caused by the scheme proposals are as follows:

Positive Impacts

- Improvements leading to benefits for safety and casualty reduction.
- Improvement of inter urban routes
- Reduction of vehicle and pedestrian /cyclist conflict.
- Benefits from landscape planting due to mitigation of landscape effects.
- Noise impacts (negative impacts are also likely to be experienced, depending on location).

Negative Impacts

- Damage to the rural character of other areas along the route.
- Damage to the built and natural environment (including archaeological sites, landscape character and ecological resource).

- Adjacent to the North Yorkshire Power Project.
- Damage to agricultural land.
- Noise impacts (positive impacts are also likely to be experienced, depending on location).

19.11 Possible Mitigation Measures of Section 2

19.11.1 Section 2 from Malton Bypass (at Brambling Fields) to Seamer Bypass (at Seamer Carr)

No specific mitigation is proposed in response to impacts on policies and plans.

19.12 Impact Assessment of Section 2

19.12.1 Section 2 from Malton Bypass (at Brambling Fields) to Seamer Bypass (at Seamer Carr)

Impacts on relevant policies and plans are listed in Table 2 below, and are summarised thereafter:

Red = The policy is hindered
Yellow = The policy is not affected
Green = The policy is facilitated

Section 2 – Malton bypass (Brambling Fields) to Seamer Carr

	Policy Title	Relevant Policy Objectives	Preferred Route	Online Route
NATIONAL LEVEL				
Planning Policy Guidance (PPG)				
		No specific PPG policies are affected by the schemes, except where reflected in local policies and plans indicated below.		
REGIONAL LEVEL				
Regional Planning Guidance for Yorkshire and the Humber (RPG12) published December 2004				
E6(b)	Economy - Tourism	Maintain a balance between the needs of visitors and the needs of host communities whilst protecting environmental tranquillity.	Neither route will impact on this policy	
E6(c)	Economy - Tourism	Ensure effective management of visitor flows and activity and encourage greater use of alternative modes of transport to the car.		
N1	Natural Environment	Promotes the protection of sites of biological importance.	Ryedale and Scarborough Local Plans detail sites of this nature	
N2	Natural Environment	Promotes the protection of sites of cultural importance.		
N3	Natural Environment	Promotes the protection of sites of landscape character importance.		
P2 (a)	Regional Spatial Policy	The Green Belts in North, South and West Yorkshire have a valuable role in supporting urban renaissance and concentration, as well as conserving countryside, and their general extent should not be changed.	No specific sites of this nature are affected by this scheme.	
P2 (b)	Regional Spatial Policy	More localised review of Green Belt boundaries may be necessary in some places through development plan reviews, but only if justified by exceptional local circumstances.		
R2	Regional Spatial Policy	Development Plans should adopt a sequential risk-based approach to development and flooding as defined in PPG25. To enable the risk from flooding to be appropriately managed in the region: b.i) In functional floodplains and washlands, and in undeveloped floodplain areas where the risk from tidal and fluvial flooding is high, development should be avoided. b.iii) Following application of the sequential approach, where other considerations in favour of the development, for example the significant need for economic and social regeneration and the need to recycle previously developed land) outweigh the flooding issues in identified flood risk areas, development will only be permitted where it has been established, following consultation with the	The scheme will affect the Environment Agency's indicative flood hazard zone.	

	Policy Title	Relevant Policy Objectives	Preferred Route	Online Route
		Environment Agency and other relevant organisations, that any necessary protection or management measures can and will be provided and are consistent with relevant management plans (e.g. Catchment Flood Management Plans).		
S1	Sustainability	Local authorities and regional stakeholders are encouraged to carry out sustainability appraisals of their plans, strategies, proposals and programmes,	The scheme neither facilitates nor hinders these objectives.	
S6	Sustainability	Promotes the wise use of non-renewable resources		
T2	Transport	Promotes the integration of modes of transport and access to it by all users.		
T9	Transport	General presumption against increases in the physical capacity of the highway network except where (amongst others) improvements result from Highways Agency Route Management Strategies.		The scheme does not result, indirectly, from an HA RMS.
COUNTY LEVEL				
North Yorkshire County Structure Plan 1995 - 2006				
A1	Agriculture and Forestry	Development which would involve the loss of agricultural land but which could reasonably be expected to take place on non-agricultural land or on agricultural land of a lower quality will be resisted. Preference will be given to the use of derelict, under-used or degraded land.	Issues relating to these policies are addressed under the Land Use – Agricultural Land heading.	
A2	Agriculture and Forestry	In allocating land for development and in considering proposals involving the loss of agricultural land, account will be taken of the need to:- (i) ensure that there is no greater loss of agricultural land than is necessary in order to carry out the development to a satisfactory standard; (ii) retain economically viable farm units and avoid the unnecessary severance and sub-division of farms.		
A3	Agriculture and Forestry	All grade 1, 2 and 3A agricultural land and the valley bottom land in upland areas will be safeguarded as far as possible from non-agricultural development.		
E1	Environment	Gives priority to the conservation of landscapes and general amenity of [amongst others] the Howardian Hills. There will be presumption against development. High standards of design will be required. Measures will be taken to protect and enhance landscapes.		Neither route is close to the Howardian Hills.
E2	Environment	Restricts development in the open countryside outside National Parks, Areas of Outstanding Natural Beauty and Green Belts.		The site is in open countryside.
E4	Environment	Buildings and areas of special townscape, architectural or historic interest will be afforded the strictest protection.		These issues are addressed under the Cultural Heritage heading.
E5	Environment	Development proposals which could result in damage to, or the destruction of, sites of archaeological importance will normally be refused.		These issues are addressed under the Ecology and Nature Conservation, headings.
E6	Environment	Development will normally not be permitted within national nature reserves, local nature reserve and sites of special scientific interest or in adjoining locations where development would have an adverse effect on such sites. Special consideration will be given to other notified sites of nature conservation significance and wildlife habitats in examining proposals for development.		These issues are addressed under the Ecology and Nature Conservation, headings.
E7	Environment	Development which would give rise to substantially increased levels of noise, water or air pollution or would be hazardous and significantly increase the risks to members of the public will normally not be permitted, but the expansion of existing industry or development essential to agriculture, mineral extraction and processing or other established industries in North Yorkshire may be allowed.		Issues are addressed under the Traffic Noise, Water Quality and Air Quality headings.
M8	Minerals	Non-mineral development will be restricted in order to prevent the sterilisation of unworked mineral resources or where it would not be compatible with mineral working and ancillary development.		Neither scheme impacts on these policies.
R1	Leisure	Provision will be made for the development of recreational, leisure and cultural facilities in locations accessible to both public and private transport where this is not detrimental to local interests.		
T6	Transport	Within built-up areas, traffic management measure will normally be preferred to major new road construction as the means of dealing with:- (i) traffic congestion; (ii) delays to bus services; (iii) accident black spots; (iv) vehicle/pedestrian conflict; and (v) extraneous traffic in residential and historic areas.		Neither route passes through any significant built up areas.
T7A	Transport	The County Council's primary road network will include the following Department of Transport trunk road schemes:- A64 Malton to Seamer.		The scheme is identified in the Councils policy document.

	Policy Title	Relevant Policy Objectives	Preferred Route	Online Route
T10	Transport	Where appropriate, provision will be made for cyclists.	If appropriate will be addressed during the design process.	
T11	Transport	As regards the needs of industry, commerce and other major developments; (ii) the use of the primary road network will be preferred, and unnecessary use by heavy goods traffic of unsuitable roads will be resisted.	Neither scheme will have any impact on this Policy.	
T17	Transport	The standard of construction or maintenance of roads other than trunk roads in national parks or conservation areas will reflect the overriding importance of environmental consideration in these areas.	This will be addressed as part of the overall design process.	
North Yorkshire Local Transport Plan 2001 - 2006				
Objective 1		To promote social equality by providing genuine choices of travel mode...	Neither scheme option will have an impact on travel choices.	
Objective 2		To limit traffic growth...	Both options are designed to improve safety and should have little or no impact on traffic growth.	
Objective 3		To provide a safe, efficient and well maintained highway network...	Both of the options will result in road safety improvements.	
Objective 4		To minimise the adverse impact of traffic on the environment...	The use of DMRB standards will minimise environmental impacts.	
Objective 5		To provide a quality public transport system...	Both schemes will have no direct impact on public transport.	
Objective 6		To reduce the number and severity of casualties...	Both of the options will result in road safety improvements.	
Objective 7		To facilitate opportunities for economic regeneration...	Both schemes will have no direct impact on economic regeneration.	
DISTRICT LEVEL				
Ryedale District Council Local Plan published March 2002				
AG1	Development of the best and most versatile agricultural land	In considering development proposals, due weight will be attached to the protection of the best and most versatile agricultural land. Development of grades, 1, 2 and 3A land will not be permitted unless:- (i) The development would allow the land to be restored to agriculture without significant detriment to its agricultural land quality; or (ii) The opportunities have been addressed for accommodating the proposed development within development limits and on previously developed sites in sustainable locations; or (iii) The site is included within Development Limits or is specifically allocated for development in the Local Plan. Whenever development of the best and most versatile agricultural land is permitted, this should take place on the areas of lowest grade land suitable for the development except where sustainable considerations suggest otherwise.	This issue is addressed under the Land Use – Agricultural Land heading.	
C1	New development and changes of use within Conservation Areas	Within Conservation Areas, the District Council will require new development to be of a high standard of design and to respect and maintain the character and appearance of the Conservation Area. Therefore, within the Conservation Areas: (i) New development, including alterations to buildings, will be expected to respect its historic context in terms of scale, form, materials and quality; (ii) Development will not be permitted if it would generate levels of traffic, parking, noise or environmental problems which would be detrimental to the character or appearance of the area; (iii) Consideration may be given to relaxing approved policies or standards if, by doing so, a Listed Building or a building of particular townscape merit in a Conservation Area under serious threat can be retained.	These issues are addressed under the Cultural Heritage and Nature Conservation headings.	

	Policy Title	Relevant Policy Objectives	Preferred Route	Online Route
C2	Demolition of buildings within Conservation Areas	Within Conservation Areas, the demolition of buildings which make a positive contribution to the character or appearance of the area will only be permitted where it can be demonstrated that:- (iii) That there is clear evidence that redevelopment would produce substantial planning benefits for the community or the character and appearance of the area that would outweigh the loss resulting from the building's demolition.	Addressed under the Cultural Heritage heading.	
C3	Open spaces which contribute to the character of Conservation Areas	Planning permission for the development of any open area of land which contributed to the character of a Conservation Area will not be granted if the land; (i) Makes a significant contribution to the character or setting of the Conservation Area or is important to views into or out of the area; or (ii) Provides an attractive setting for buildings within it; or (iii) is important to the historical form and layout of the settlement.	These issues are addressed under the Cultural Heritage and Nature Conservation headings	
C6	New Conservation Areas	The District Council will examine the following settlements to determine whether or not any areas are of sufficient special architectural or historic interest to warrant preservation or enhancement by their designation as Conservation Areas:- Includes Scampston	Scampston is within both route corridors.	
C9	Demolition of Listed Buildings	The demolition of a Listed building will only be allowed in exceptional circumstances. Before consent is granted for the demolition of a Listed Building, applicants will be required to submit convincing evidence to show that: (i) Because of the condition of the building, it would be uneconomic to repair and maintain it; and (ii) It has been impossible to find a suitable viable alternative for use of the building; or (iii) That there is clear evidence that redevelopment would produce substantial planning benefits for the community which would decisively outweigh the loss resulting from the building's demolition.	These issues are addressed under the Cultural Heritage heading.	
C10	Historic Environment	The Council will not permit development which would adversely affect the setting of a Listed Building.		
C13	Archaeological investigation of sites	Where development proposals affect sites of lesser or potential archaeological importance, the District Council may request desk-top assessment or field evaluation as part of a planning application, to provide adequate assessment of the nature, extent, and importance of the remains present and the degree to which the development is likely to affect them. Where physical preservation in situ within development proposals is not possible or justified, the District Council in granting permission will require the implementation of a programme of archaeological investigation, recording and publication as part of the development scheme.		
C14	Archaeological Remains	The Council will exercise a presumption in favour of the preservation of nationally important archaeological remains and their settings, and the preservation in situ within a development of other important sites.		
C15	Historic parks and gardens	The District Council will not grant permission for any development which would have a material adverse effect on either the character or setting of an Historic Park or Garden.		
EMP 10	Industry & business	Relates only to small industrial and business developments within settlements. Requires "...sufficient and safe provision..." for road traffic generated by schemes.	All the options will result in road safety improvements.	
EMP 15	North Yorkshire Power Project, East Knapton	Further development around the power plant at East Knapton will only be permitted where it is:- (i) Essential for the proper functioning of the gas plant and has to be accommodated on the site itself, and (ii) Situated wholly within the existing site boundary, and (iii) In accordance with Policy EMP13.	Route runs close to this site	Site is on the edge of the route corridor
ENV 2	Landscape Environment and wildlife	The natural beauty of the Howardian Hills Area of Outstanding Natural Beauty will be given the greatest possible protection and, in this area, this will be given priority in the determination of development proposals.	The site does not lie within the Howardian Hills.	
ENV 3	Development in the Areas of High Landscape Value	Within the Wolds and the Fringe of the moors Areas of High Landscape Value:- (i) Development which would materially detract from the special scenic quality of the landscape will be resisted; (ii) Small-scale development that would benefit the social or economic situation of rural communities including agricultural uses, farm diversification proposals, affordable housing where this meets with the criteria of Policy H20 and facilities for tourists and for outdoor sports and recreation will be permitted, provided that	Will be addressed by the Landscape Effects heading. Both route corridors include parts of the Wolds	

	Policy Title	Relevant Policy Objectives	Preferred Route	Online Route
		<p>such development can be accommodated without significant detriment to local landscape character;</p> <p>(iii) Large-scale development will only be permitted where it can be clearly demonstrated that the proposal would have significant economic or social benefits, is incapable of being locate outside the Areas of High Landscape Value and is designed to do as little damage to the environment as practicable;</p> <p>(iv) Non-agricultural buildings and development will be required to reflect the traditional character of buildings and landscape form in terms of siting, design and use of materials traditional to the area. Agricultural buildings will be required to accord with Criteria (i) and (iii) of Policy AG2;</p> <p>(v) Landscaping schemes will be required to reflect local landscape character in terms of form and extent of planting and in terms of species used;</p> <p>(vi) The conservation and appropriate management of features important to the local landscape such as trees, hedges, copses, woodlands and grassland will be encouraged.</p>		
ENV 4	River and stream corridors	<p>The District Council will normally resist development which would have a material detrimental impact on the natural features of river and stream corridors within the Plan area. In particular, the District Council will, in consultation with the Environment Agency (and, where appropriate, the relevant Internal Drainage Board), seek to conserve and enhance the environmental and amenity value of these corridors by:-</p> <p>(i) Protecting existing natural features and marginal vegetation;</p> <p>(ii) Resisting, unless absolutely essential, proposals to divert, culvert, straighten or otherwise modify river and stream channels;</p> <p>(iii) Resisting development that would directly or indirectly have a material adverse impact on their character, archaeological or historic interest and their amenity or landscape value;</p> <p>(iv) Requiring that the design of structures and engineering works is appropriate in form and scale to their setting;</p> <p>(v) Promoting the maintenance, enhancement and, in appropriate situations, the restoration of the wooded character, marginal vegetation and other natural features of river and stream courses;</p> <p>(vi) Requiring the retention of a buffer strip between the watercourse and the development when it is considered otherwise acceptable to allow development within a river and stream corridor. Such areas should be of sufficient width and character to protect the visual, ecological, amenity, historical and engineering interests. Where appropriate, the District Council will also seek the retention of buffer strips between watercourses and significant areas of dense new planting’</p> <p>(vii) Resisting proposals which would not accord with the nature conservation policies of the Local Plan.</p> <p>Development which would not accord with the above criteria will only be permitted when it can be clearly demonstrated that the economic or social benefits of the proposal would outweigh the detriment that would be caused to the river or stream corridor. Proposals which would involve the loss of habitat or natural features will be required to create new habitat of an appropriate type and size in the vicinity of the site or provide other appropriate compensatory measures.</p>	Addressed under the Landscape effects and the Water Quality and Drainage headings.	
ENV 5	Visually Important Underdeveloped Area	<p>Proposals to develop upon any Visually Important Undeveloped Area defined on the Proposals Map will not be permitted except where:-</p> <p>(i) The economic and social benefits of the development would significantly outweigh the loss or damage to the character of the area, or</p> <p>(ii) The development would not have a material adverse effect upon the character or appearance of the area.</p>	Neither route is close to any Visually Important Undeveloped Area.	
ENV 6	Tree Preservation Orders	<p>The District Council will make Tree Preservation Orders on individual trees, groups of trees, or woodlands which are important to the local landscape or streetscene for their amenity and scenic value, or which make an important environmental contribution. When determining applications to fell or to carry out other works to trees subject to Tree Preservation Orders, the Council will take into account the health and stability of the trees, their likely lifespan and the continuing contribution of the trees to public amenity. An arboriculturist’s report will normally be required.</p>	These issue are addressed under the Landscape Effects heading.	

	Policy Title	Relevant Policy Objectives	Preferred Route	Online Route
ENV 7	Landscaping	<p>Wherever appropriate, development proposals will be required to incorporate a suitable high-quality landscaping scheme that enhances and complements the local environment. Such schemes should normally use native, locally-occurring species. Detailed permission will not be granted in advance of the submission of a suitable landscaping scheme, where required, and where appropriate, development will not be permitted until the appropriate landscaping has been undertaken. Landscaping proposals must not materially detract from the value of areas of archaeological or ecological importance.</p> <p>Existing trees and hedgerows will normally be required to be retained and should be incorporated into the design of new developments. Applications for development on sites with existing trees and hedgerows should be accompanied by the following details:-</p> <ul style="list-style-type: none"> (i) An accurate tree and hedge survey indicating the positions, species and spreads of all trees and hedges within and surrounding the site (normally at 1:2000 scale); (ii) An accurate survey of the topography indicating existing and proposed changes in ground level; (iii) The location of proposed and repositioned underground services in relation to existing trees and hedges; (iv) Details of tree and hedge protection measures during construction. 	Will be incorporated into the scheme design.	
		<p>Applications for development on sites which contain trees or hedgerows of significant amenity value will be required to be accompanied by a 'Method Statement' for arboricultural works.</p> <p>Proposals to remove existing trees or hedges will only be permitted if they represent a material threat to public safety or property, are diseased or dying, involve a species which is detrimental to landscape quality or where the benefits of the development would clearly outweigh the importance of the trees and hedges on the site. Veteran trees which provide an important habitat should be retained in appropriate undeveloped areas of the site. Where it is appropriate to remove a tree or hedgerow, the District Council will require the planting of sufficient replacements to compensate for the detrimental effect on the landscape, wildlife and on atmospheric quality.</p> <p>The District Council will monitor the implementation of agreed schemes and the well-being of all new and replacement planting and will, in appropriate circumstances, take action to ensure the implementation of outstanding schemes and also the replacement of any unsuccessful specimens.</p> <p>In some cases, off-site landscaping may be required as an alternative to, or in conjunction with on-site landscaping.</p>		

	Policy Title	Relevant Policy Objectives	Preferred Route	Online Route
ENV 8	Environmental Impact Assessment	<p>In order to make a full assessment of projects likely to have a major effect on the environment the District Council will require an Environmental Impact Assessment to be submitted for:-</p> <p>(i) All Schedule 1 Projects*</p> <p>(ii) Any Schedule 2 Projects* which by virtue of their nature, size or location, would be likely to have a significant effect on the environment. Particular regard will be paid to the likely effects of proposals on the Howardian Hills AONB, SSSIs, SINCs and other important nature conservation sites. Conservation Areas and historic town centres, Scheduled Monuments and areas containing a significant number of dwellings.</p> <p>* As defined by the Town and Country Planning (Environmental Impact Assessment) Regulations 1999.</p> <p>In addition to the habitat linked to the Character Areas of Ryedale, other general habitat types are of particular importance, both in their own rights and as part of a network of sites and features across Ryedale and beyond. These include disused quarries such as Wharram Quarry and Wilton Heights Quarry which often provide a range of conditions including hugely valuable areas of scree. In addition, ponds have been shown to be lost at significant rates (a 1994 survey showed around a third of marked ponds to be filled in or dried up) in parts of Ryedale. Historic parklands with their veteran trees and many hedgerows and small copses can be vital to ensuring the maintenance of the current range and diversity of our flora, fauna, geological and landform features and the survival of important species.</p> <p>The nature conservation Policies have the following main objectives:-</p> <p>To protect, maintain and wherever possible, enhance bio-diversity in Ryedale and beyond.</p> <p>To protect and, wherever possible, enhance sites and features of particular wildlife and geological value particularly where they provide a habitat for a protected species of special conservation concern and/or provide a landscape feature.</p> <p>To create appropriate new habitat and to implement measures to enhance public awareness, understanding and enjoyment of nature conservation and geology.</p>	This report is part of the Environmental Impact process	
ENV 10	SSSI's, NNR,GCR & NCR	<p>Proposals for development within or likely to affect a designated or proposed Site of Special Scientific Interest will be subject to special scrutiny. Where such development may have a detrimental effect, either directly or indirectly, on the SSSI, and all damage could not be prevented through the use of conditions or planning obligations, the development will not be permitted unless the benefits of the development would clearly outweigh the national importance of the site and the national policy to safeguard the intrinsic nature conservation value of the national network of such sites and it can be demonstrated that no suitable alternative site is available for the development. Particular regard will be paid to the national importance of sites which are a National Nature Reserve (NNR) or a Geological Conservation Review (GCR) or a Nature Conservation Review (NCR) site.</p> <p>Conditions and planning obligations will be used:-</p> <p>(i) Where they would allow development to proceed without causing damage to an SSSI; or</p> <p>(ii) To limit and to require compensatory measures for the detrimental effects of development which is permitted because its benefits clearly outweigh the value of the SSSI.</p>	Sites identified as relevant to ENV10 and ENV11 are identified on the Proposals Map as lying just outside the corridor near East	Sites identified as relevant to ENV10 and ENV11 are identified on the Proposals Map close to the route near East Hesterton

	Policy Title	Relevant Policy Objectives	Preferred Route	Online Route
ENV 11	Internationally Important Nature Conservation Sites	Proposals for development or land use which may affect a European site, a proposed European site or a RAMSAR site will be subject to the most rigorous examination. Development or land use change not directly connected with or necessary to the management of the site and which is likely to have a detrimental effect on the site (either individually or in combination with other plans or projects) will not be permitted unless it can be clearly demonstrated that:- (i) there is no alternative solution; and (ii) there are imperative reasons of over-riding public interest for the development or land use change that clearly outweigh the international importance of the site. Where the site concerned hosts a priority natural habitat type and/or priority species, development or land use change will not be permitted unless the authority is satisfied that it is necessary, for reasons of human health or public safety or for beneficial consequences or primary importance for nature conservation. Where development does not proceed that would be detrimental to a Natura 2000 site, the District Council will use conditions and/or planning obligations to secure all compensatory measures necessary to ensure that the overall coherence of Natura 2000 is protected.	Hesterton	
ENV 12	Nature Conservation	Proposals for development that would have a material direct or indirect detrimental effect on a Site of Importance for Nature Conservation or a Local Nature Reserve will only be approved:- (i) Where conditions and/or planning obligations can be used to prevent material damage to the value of the site; or (ii) Where it can be demonstrated that the benefits of the development clearly outweigh the significant importance of the site and that no suitable alternative site is available. In such cases, the District Council will use conditions and/or planning obligations to ensure that damage to the site is kept to an absolute minimum and that appropriate compensatory habitat creation and/or enhancement measures are carried out on or close to the site.	No sites of this nature are identified on the Proposals Map as close to either route.	
ENV 13	Regionally Important Geological/ Geomorphological Sites	The District Council will aim to avoid detrimental effects of development proposals on Regionally Important Geological/Geomorphological Sites (RIGS) by use of planning for the creation of new exposures. Where it is not possible to avoid material damage to the value of a RIGS, the District Council will only grant permission if it can be clearly demonstrated that:- (i) The benefits of the development outweigh the value of the site; and (ii) There are no suitable alternative sites available for the development; and (iii) The damage to the value of the site will be kept to an absolute minimum.	These issues are addressed under the Cultural Heritage heading.	
ENV 14	Semi-natural habitats	Development that would materially detract from the ecological or landscape value of semi-natural habitats* will only be permitted where it can be demonstrated that the benefits of the development would clearly outweigh the importance of the site or feature. Where development that would materially damage the value of the site is permitted, such damage must be kept to an absolute minimum and appropriate habitat creation and enhancement measures will be required on or near the site. *Otherwise undesignated ancient woodlands, unimproved and semi-improved grassland, wetlands (including fens, mires, bog and flushes) low land heath and important hedgerows and verges.	Issues are addressed under the Ecology and Nature Conservation heading.	
ENV 15	Plant and animal species protected by law	Development will not be permitted which would have a direct or indirect detrimental effect on an animal or plant species protected by law. However, where appropriate, conditions and/or planning obligations will be used where this would allow development to take place without detrimentally affecting such species.		
ENV 16	Species of Special Conservation Concern	Development that would directly or indirectly have a materially detrimental effect on a Species of Special Conservation Concern will only be permitted where it can be demonstrated that the benefits of the development clearly outweigh the need to safeguard that species. Wherever appropriate, conditions and/or planning obligations will be used to minimise detrimental effects of development on Species of Special Conservation Concern and to require relevant habitat creation and/or enhancement measures on or close to affected sites.		

	Policy Title	Relevant Policy Objectives	Preferred Route	Online Route
ENV 18	Ponds	Development that would materially detract from the ecological, historical or landscape value of any important pond will only be permitted where it can be demonstrated that the benefits of the proposal would clearly outweigh the importance of the pond. Where such development is permitted, conditions and/or planning obligations will be used to minimise the damage and to ensure that where appropriate, habitat creation and/or enhancement measures are implemented on or close to the site.		
ENV 19	Wildlife Corridors	Development that would normally be materially detrimental to a countryside feature which acts as a wildlife corridor will only be permitted where it can be demonstrated that the benefits of the development would clearly outweigh the resultant detriment to local wildlife and to the value of that feature as a wildlife corridor. In such cases, conditions and/or planning obligations will be used to minimise damage and to ensure habitat enhancement and/or creation is carried out on or close to the site wherever appropriate.		
ENV 20	Habitat creation and public access to nature conservation sites	The District Council will support appropriate proposals which would increase the number, size and diversity of sites of nature conservation importance, and new development should include measures to achieve this aim wherever possible. Appropriate proposals to enhance public awareness and enjoyment of nature conservation sites and features will be supported where existing features of biological or geological importance will not be adversely affected.	Neither scheme will impact on this Policy	
ENV 21	Pollution Control	Proposed development with the potential to pollute will not be permitted where, in the view of the District Council, any likely pollution will have an unacceptable impact which cannot be overcome by planning conditions or legal agreements. In considering proposals the Council will take into account:- (i) The impact on the health, safety and amenity of the general public; (ii) The impact on neighbouring land and other land uses; (iii) The impact on other Policies and proposals of the plan; (iv) The impact on the natural environment; (v) The advice of the pollution control agencies; (vi) The restoration of the site when the use has ceased (where appropriate).	The use of current design standards is likely to result in improvements or at worst no change concerning these issues. These issues are dealt with in the section relating to Water Quality and Drainage.	
ENV 22	Water Quality	Development will not be permitted which, in the opinion of the District Council after consultation with the Environment Agency, would unacceptably prejudice the quality of surface or ground water. The District Council will generally support initiatives which would lead to improvements in surface or ground water quality.		
ENV 23	Air Quality	Development which would have a significant adverse effect on air quality will not be permitted. Where appropriate, the District Council will require suitable measures to be taken in new development to prevent any risk to public health from the release of airborne pollutants.	The section on Air Quality addresses these issues.	
ENV 24	Noise-generating development	Development which would cause unacceptable levels of noise disturbance will not be permitted. In particular, development will be resisted which would lead to unacceptable levels of noise disturbance problems through the introduction of a noise-generating development into a noise-sensitive area or through the introduction of noise-sensitive development into an area of high noise levels. Where noise problems can be overcome using mitigation measures, these will be enforced through appropriate planning conditions and/or legal agreements.	Noise impacts are addressed under the Traffic Noise and Vibration heading.	
ENV 25	Development and Flood Risk	In order to minimise flood risk, proposals for development will be assessed against:- <ul style="list-style-type: none"> · the advice of the Environment Agency; · the level of actual risk involved; · the need for urban regeneration and the redevelopment of previously developed land; and · the following criteria:- A In areas with a high risk of flooding*, new development, including proposals which involve the raising of land, will only be permitted where:- (i) In the case of areas that are considered by the Environment Agency to act as functional flood plain, there would be no development except for essential transport and utilities infrastructure which could not be located in an area of lower risk. Where, exceptionally, such development is permitted this will be subject to satisfactory design and compensatory flood storage measures;	Scheme design and mitigation measures for options will result in very small impacts, if any, on flood risk. Flood area by Settrington Beck identified on the Proposals Map	

	Policy Title	Relevant Policy Objectives	Preferred Route	Online Route
		<p>(ii) In the case of areas within development limits, new development will be permitted provided that flood defences to the appropriate standard for the proposed development are available or will be provided. In such cases, the proposed buildings and layout should be adequately designed to resist flooding. Development will only be permitted where it would not increase the risk of flooding elsewhere, and the proposal includes, where necessary, the provision of adequate compensation measures to prevent this occurring.</p> <p>(iii) In all other high risk areas outside development limits, proposals which involve general purpose housing and residential or institutional accommodation will not be permitted. Job-related residential development and commercial and industrial proposals will only be permitted where that location is essential and there are no alternatives in areas of lower risk. Where, exceptionally, development is permitted this will be subject to the provision of satisfactory flood prevention measures and associated compensatory flood storage measures.</p> <p>B Developers will be required to fully fund the provision and future maintenance of flood mitigation and defence measures required as a result of their proposals, including any consequent works to prevent additional flood risk to other properties. Any flood protection or mitigation measure should not have any material adverse effect upon the nature conservation value of the area or detract from the character or setting of nearby settlements or Listed Buildings or sites of archaeological value.</p> <p>C A Flood Impact Assessment, prepared in consultation with the Environment Agency, will be required to be submitted with any planning application that is within an area considered to be at risk from flooding or that would materially increase the risk of flooding through run-off.</p> <p>D Development that would increase the risk of flooding through altered surface water run-off must include adequate measures to prevent this. Wherever appropriate, new development should incorporate a sustainable drainage system in order to manage water run-off rates and so assist with the prevention of flooding.</p> <p>The 'approximate extent of the area liable to flood' in the Plan area is shown on the Proposals map and accompanying insets. This represents the area of high risk i.e. with an annual probability of flooding of 1% or greater. However, this information is indicative and is liable to change. For detailed information on areas at risk from flooding, including the location and extent of functional flood plains, consult the Environment Agency.</p>		
ENV 29	Light pollution	<p>Proposals which involve outdoor lighting schemes should normally submit details of such schemes as part of the planning application. Outdoor lighting schemes should represent the minimum level required for security and working purposes and should be designed to minimise glare and spillage. The District Council will normally resist outdoor lighting schemes that would seriously detract from:</p> <p>(i) The generally unlit rural character of a landscape; or (ii) Residential amenity; or (iii) Highway safety.</p>	If appropriate this issue will be addressed as part of the design process.	
GB3	Scale, location and design of buildings within the Green Belt	<p>Planning permission for development listed in Policy GB2 will only be granted where it can be shown that the scale, location and design of such development would not:-</p> <p>(i) Detract from the open character of the Green Belt, or (ii) Adversely affect the visual amenities of the Green Belt, or (iii) Conflict with the purposes of including land within the Green Belt.</p>	Neither route is within a Green Belt.	
H7	Housing	Relates only to residential developments.	These policy areas are not affected by either scheme.	

	Policy Title	Relevant Policy Objectives	Preferred Route	Online Route
L6	New Public Open Space	The District Council will safeguard the following areas from development likely to prejudice their potential future use as a public open space. During the Plan period, the District Council will seek to secure these areas as public open space:- (i) The land alongside the River Derwent, Malton and Norton (Inset Map 3), (ii) The area north of Beck Isle Museum, Pickering (Inset Map 4), (iii) Land alongside Pickering Beck south of Vivis Bridge, Pickering (Inset Map 4).	Neither route corridor is within these areas.	
L7	Public Open Space	Development which would be likely to result in the loss of, or have an adverse effect upon, any area of public open space or other informal open area defined on the Proposals Map will not be permitted.	No areas within the route corridors are identified on the Proposals Map.	
L8	Allotments	Planning permission will not be granted for any development which would result in the total or partial loss of existing allotments as defined on the Proposals Map.		
TM1	Tourism	Relates only to developments of hotels, guest houses and other visitor accommodation within settlements.	These policy areas are not affected by the scheme.	
T1	Transport	Outside the Howardian Hills AONB, the District Council will only support proposals for new roads and other improvements to the road network which:- (i) Improve highway safety and/or bring about a net environmental and economic benefit; (ii) Produce environmental and/or safety benefits which could not reasonably be achieved through traffic management measures alone; (iii) Minimise adverse effects on residential amenities, settlements and their setting and the character and appearance of the countryside; (iv) Avoid, where possible, the best and most versatile agricultural land and the unnecessary fragmentation of farms; (v) Have no material adverse impact on sites of nature conservation value, archaeological or historic importance, or any other sites protected for their special qualities through the policies of this Plan; (vi) Incorporate an integral and extensive landscape scheme to maintain and, wherever possible, improve environmental standards; (vii) Minimise adverse effects on public rights of way and ensure that the needs of those travelling by means other than the private motor vehicle are not materially adversely affected and, wherever possible, are improved by the proposal; (viii) Be routed so as to minimise pressure for new development; (ix) Incorporate suitable road-crossing measures for wildlife where necessary. Where appropriate, a formal Environmental Impact Assessment will be requested in order to fully assess the proposal.	Both of the scheme options will result in safety benefits, and environmental impacts will mostly be mitigated by detailed design. However, taken overall the impact of both of the schemes on this policy will be neutral.	
T2	Transport	Within the Howardian Hills AONB, the District Council will, as the determining Authority or in its role as consultee:- (i) Strongly oppose new trunk and primary roads; (ii) Carefully examine new proposals to widen or alter existing roads or to create minor access roads to ensure that they: are necessary; would not lead to significant increases in speed or traffic flow; would not materially adversely affect the needs of those travelling by means other than the private motor vehicle; and would minimise damage to the environment; (iii) Seek to retain the irregular pattern and the character of the minor road network. Proposals for new trunk or primary roads outside the AONB will be opposed where they would significantly detract from the setting of the Howardian Hills AONB.	Neither route passes within the Howardian Hills AONB.	
T5	Transport	Within new development, the use of innovative road layouts and highway designs that reflect the historical character of the area will generally be supported where appropriate and where compatible with road safety considerations.	The scheme designs will be developed in accordance with DMRB. This policy relates principally to road layouts within new domestic or industrial developments. In the case of a major road fewer opportunities arise for innovative road layouts.	

	Policy Title	Relevant Policy Objectives	Preferred Route	Online Route
T8	Public transport and rail services	The District Council will continue to encourage and support proposals for improvements to public transport and rail services in the Plan area. To this end the District Council will:- (iv) Ensure that, where practicable, provision is made in the layout and design of major new developments for the easy access of public transport services in order that the new development can be conveniently assimilated into the local public transport network.		Neither scheme will have any direct impact on Public Transport services.
T9		The District Council will seek to improve the safety, convenience and attractiveness of cycling by:- (i) Ensuring, where appropriate, that new developments include appropriate measures to make access by cycling, both within the development itself and to the surrounding road and cycle network, safe and convenient; (ii) Investigating, in conjunction with North Yorkshire County Council, the preparation of Cycle Studies of the Market Towns and rural areas, to form the basis of Cycling Plans for these areas. These Plans will set out detailed proposals to enhance local cycling facilities and, where appropriate, give an increased priority to cyclists on the existing road network. New routes and/or improved facilities between settlements will also be pursued, together with the establishment of links to the National Cycle Network.		Cyclist provision will be addressed as part of the design process.
T10		The District Council will seek to ensure improvements in the safety, convenience and attractiveness of facilities for pedestrians and in the Public Rights of Way network by:- (i) Where appropriate, requiring new development to include pedestrian facilities which link to the surrounding Rights of Way network and with routes to local centres and public transport facilities; (ii) Ensuring that all new pedestrian facilities are designed to encourage walking and to be both safe and convenient; (iii) In conjunction with North Yorkshire County Council, investigating the possibility of improving existing and creating new facilities for pedestrians, including, where appropriate, combined walking/cycling/horse-riding routes; (iv) Ensuring that existing public footpaths and bridleways and the enjoyment of them will not be adversely affected by new development, particularly where the Right of Way forms part of a designated National Trail, and that where diversions of Public Rights of Way are proposed, these will only be supported where the alternative route will be equally pleasant and convenient; (v) Ensuring, wherever appropriate, that adequate provision is made for people with disabilities.		All existing pedestrian facilities will be maintained.
T11	Disused railway lines	On the disused railway lines identified on the Proposals Map, development which would prejudice their future use as possible cycle/footpath/horse riding routes or for potential public transport use will not be permitted. The District Council will encourage assessment of the use, where practicable, of these disused railway lines for the creation of new routes for cyclists, walkers and horse riders and, in the longer term, for their use by public transport. Proposals which would be materially detrimental to wildlife will not be advanced.		No disused railway lines are within either route corridor.
U3	Utilities	The District Council will not permit any development which would result in an adverse impact on the water environment due to additional surface water run-off. Development which would increase the risk of flooding must include appropriate attenuation or mitigation measures, including restoration of the floodplain, as defined by the Council in consultation with the Environment Agency and, where appropriate, the relevant Internal Drainage Board. These works must be funded by the developer. Developers will also be expected to cover the costs of assessing surface water drainage impacts and of any appropriate mitigation works, including their long-term monitoring and management. Wherever appropriate, the District Council will strongly support the use of sustainable drainage systems.		All appropriate mitigation measures will be incorporated within the scheme design.
Scarborough Borough Local Plan (April 1999)				
E3	Landscape Between Settlements	The open landscape between the following settlements will be protected from harmful development.		No settlements listed are within either route corridor
E4	The Protection of Landscape Features	Existing landscape features or remnant areas of countryside which make an important contribution to the setting or character of settlements will be safeguarded and development will only be permitted where such features can be retained or enhanced.		Will be addressed as part of the design process.

	Policy Title	Relevant Policy Objectives	Preferred Route	Online Route
E5	Road and Rail Approaches to Resort Towns	Tree preservation orders will be used to protect vulnerable trees on such sites where considered important to the landscape setting of a site or area.	Will be addressed under the Ecology and Nature conservation heading	
E7	Local Nature Conservation Sites	The nature conservation importance of all development sites will be taken into account. Developments which could adversely affect nature conservation interests will only be permitted where the benefits from the development outweigh the nature conservation importance of the site or where planning conditions or legal agreement can be used to: (A) Minimise any harm arising; or (B) Compensate for any harm through alternative habitat creation or other appropriate nature conservation measures. Development will not be permitted where it would result in the loss of, or seriously harm, significant wildlife corridors.	Flaxton Carr Plantation is on the boundary of the corridors for both routes.	
E8	National Nature Conservation Sites	Proposals which are likely to adversely affect, directly or indirectly, the nature conservation interest of a site of special scientific interest, national nature reserve or other statutorily designated nature conservation site will be subject to special scrutiny and will only be permitted if harm to the interest can be overcome by conditions or planning obligations or if there are special reasons for granting the permission which outweigh the national importance of the site.	River Hertford and site at Merry Lees marked on Scarborough Borough Councils Proposals Map	
E9	International Nature Conservation Sites	On sites which are designated or proposed to be designated because of their international importance for nature conservation, proposals will normally only be permitted where they are directly connected with or necessary to the management of the site, or, together with other proposals, they will not adversely affect the integrity of the site. Proposals which do not meet these criteria will only be permitted where no alternative site exists and there are imperative reasons of overriding public interest, but where the site hosts a priority habitat or species (as listed in EC Directive 92/43), proposals will only be permitted where they are required for reasons of human health and public safety or will lead to benefits of primary importance for the environment. The designated special protection areas and any proposed special area of conservation form part of the Natura 2000 European Network of Nature Conservation sites wherein, in addition to any mitigation measures necessary to accommodate development within the above terms, special compensatory measures may be required through planning conditions/legal agreement, to maintain the coherence of this network.	Will be addressed under the Ecology and Nature Conservation heading	
E10	Species Protection	Development likely to affect a specially protected wildlife species will only be permitted where any potential harm can be avoided by the use of planning conditions or legal agreements which will:- (A) Facilitate the survival in situ of all individual members of the species; or (B) Provide adequate alternative habitats to sustain at least current levels of population; and (C) Minimise disturbance to the species during any construction phase and subsequent occupation.	Will be addressed under the Ecology and Nature Conservation heading	
E11	Protection of Water Resources	Development that will lead to a deterioration in, or pose a serious threat to the quality of surface, underground, or sea water will not be permitted.	Will be addressed under the water quality and drainage heading	
E13	Landscaping of New Development	Landscaping Schemes are expected to be an integral part of the design of new development. Sufficient details should be provided in support of proposals, incorporating measures which will: (A) Protect existing attractive landscape features such as hedgerows and trees; and (B) Provide substantial areas as appropriate of hard and soft landscaping and tree planting which will improve the setting of development; and (C) Maximise the potential for maintaining and creating wildlife habitats	This will be included in the design of both routes	
E16	Development on Unstable Land	Applications for the development of land which may potentially be unstable should be accompanied by a site survey undertaken at the developer's expense.	This issue is dealt with under the Geology and Soils heading	
E19	Flooding and Coastal Erosion	Development which is likely to lead to an increase in flooding or coastal erosion will not be permitted.	Scheme design and mitigation measures for both options will result in very small impacts, if any, on flood risk	

	Policy Title	Relevant Policy Objectives	Preferred Route	Online Route
E24	Demolition in Conservation Areas	The demolition of buildings and structures which positively contribute to the character of conservation areas will only be permitted where it can be shown that the building is wholly beyond repair or is incapable of reasonable beneficial use. Where a case for demolition is proven conditions will be used to prevent demolition works prior to the approval of, and letting of, contracts for the development proposals.	These issues are addressed under the Cultural Heritage heading	
E26	Demolition of Listed Buildings	There is a general presumption in favour of the protection and preservation of listed buildings. The total or partial demolition of a listed building or associated structure will not be permitted unless its restoration or retention has been proved to be impracticable or where there are other exceptional reasons outweighing the need for retention. Where a case for demolition is proven, conditions will be used to prevent demolition works prior to the approval of, and letting of, contracts for the development proposals.		
E27	The Protection of Significant Views	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.	These issues are addressed by the Views from the Road and Landscape Effects headings.	
E28	Archaeology	There is a presumption in favour of the physical preservation of nationally important archaeological remains, whether or not scheduled. Developments that would damage the site; detract from its archaeological quality and importance; adversely affect its setting; or, prejudice its future investigation will not be permitted. In addition to the sites identified on the proposals map, this policy also relates to any other sites which are subsequently deemed to be of national importance where research indicates that archaeological remains may exist within a site, applicants will be required to submit an archaeological field evaluation to assist the determination of a planning application. Development affecting other sites of archaeological interest will only be permitted subject to conditions requiring: (i) an archaeological investigation, paid for by the developer, prior to the development commencing; and/of (ii) the siting and design of new buildings and foundation to enable the preservation of any remains.	These issues are addressed under the Cultural Heritage heading	
E29	Historic Parks and Gardens	Development that would detract from the character or appearance of historic parks or gardens and their settings, whether or not included in the English Heritage Register of Park and Gardens of Historic Interest.		
E38	The Protection of Air Quality	Development will not be permitted where any resultant deterioration in air quality would directly affect: (1) Residential amenity through smell, dust or in terms of public health; (2) The recreational enjoyment of the Coast, the Wolds or the North York Moor fringe; (3) Nature conservation interests; (4) The implementation of Local Plan land allocations	This issue is addressed under the Air Quality heading	
E39	Development Affecting Hedgerows and Trees	Development likely to affect hedgerows and trees which make an important contribution to landscape character or are otherwise important as wildlife corridors will be required to keep any loss or damage to an absolute minimum. Wherever possible, planning conditions will be used to ensure that existing hedgerows and trees are retained and enhanced as part of the landscaping of new development.	Issues related to this are addressed under the Ecology and Nature Conservation and Landscape Effects headings.	
I2	Allocated Employment Sites	The following sites are allocated for industrial and business development within the specified classes of the Town and Country Planning (Use Classes) Order 1987 as amended.	No sites are identified within either route corridor	
I4	Safeguarding Existing Employment Areas	In order to ensure there is an adequate supply, variety and distribution of land and premises in the Local Plan Area to meet the strategic requirement, existing industrial and business premises and sites shall be safeguarded, proposals for their change of use shall not be permitted unless:- (1) It is clearly demonstrated that there is no reasonable prospect of economic re-use for industrial or business purposes; or (2) There are substantial environmental, amenity or employment benefits, particular emphasis shall be placed on retaining industrial or business uses in the following circumstances: (A) In Filey and Scarborough (except Eastfield). (B) Where the premises occupy a prominent location on a major road frontage. (C) On the periphery of town centres.	Neither scheme would have any direct impact on this policy.	

	Policy Title	Relevant Policy Objectives	Preferred Route	Online Route
L14	The Mere and Oliver's Mount	The Mere and Oliver's Mount will be developed as a Country Park facility including the retention of areas for the quiet enjoyment of the landscape. Development that is incompatible with this use will not be permitted.		Although outside the corridor the route could be part of the access routes to these facilities.
H10	Protection of Residential Amenity	Planning permission will not be granted for development that would have a serious effect on residential amenity. In considering proposals account will be taken of: (C) Disturbance or danger resulting from the level of traffic likely to be generated by the development; (D) Levels of noise, smell and other emissions and pollutants; (E) The impact of the development on the appearance of the area; and (F) The loss of significant open space or landscaped areas.		These issues are addressed under the Community Effects, noise and Air Quality headings.
T1	Highway Schemes	Where necessary land will be safeguarded for the construction of the following highway schemes: schemes identified in Plan as a longer term schemes .		These issues will be addressed as part of the overall design process.
T2	Design of New Roads	The design and construction of new roads and maintenance and improvement works to existing roads will be expected to reflect: (A) The quality and characteristics of the local environment, especially in rural areas and conservation areas; (B) The need and opportunity for any landscaping works; (C) Road safety requirements; (D) Opportunities to improve road conditions for buses and non-motorised transport modes; (E) The importance of avoiding severing or diverting bridleways, footpaths and lanes; (F) The possibilities for any other mitigation measures.		
T5	Park and Ride	Facilities for Park and Ride will be provided in the following locations in Scarborough: (C) Land to the north of Dean's Garden Centre A64(T) Seamer Road.		This facility although planned close to the A64 is not on sections identified in this report.
T11	Facilities for Pedestrians	Facilities for pedestrians will be improved by: (C) providing new pedestrian crossings at main roads. Discourage use by non-essential through traffic.		Will be addressed under the Pedestrian and Community Effects headings.
T14	Trunk Roads	Where traffic generated by proposed developments is expected to cause the capacity of a junction on the A64(T) trunk road to be exceeded, development will only be permitted where necessary junction improvements are undertaken prior to the occupation of the development, to meet the requirements of the Department of Environment, Transport and the Regions (DETR).		Junction effects will be addressed as part of the design process.
R1	Public Open Space Allocations	The following sites are allocated for the provision of public open space. POS 1 : Former Crossgates Quarry, Crossgates. POS 14 : South of Middle Deepdale Farm, Scarborough. POS 15 : South of HighEastfield Farm, Scarborough		No sites are close to either route.
R5	Protection of Recreational Facilities	Existing sport, recreation and leisure facilities, including public open space, that are well utilised by the community will be safeguarded. Development that would involve the loss of such facilities will not normally be permitted unless:		No sites relating to these facilities have been identified as part of this process.
R9	Rights of Way	Planning permission will not be given for development that will adversely affect a public right of way or its enjoyment by those who wish to use it unless the proposals include satisfactory provision to divert or replace the existing route.		If appropriate, measures to address this issue will be included in the scheme design.
C3	Public Utility Installations	Where planning permission is required, proposals for new and replacement utility installations will be permitted where they are sympathetic to the character and appearance of their surroundings.		If appropriate will be addressed as part of the design process.
C9	Development in the Vicinity of Waste Water Treatment Works	Development will only be permitted in the vicinity of waste water treatment plants provided that a satisfactory standard of amenity can be achieved for potential occupiers or users of the development		Non in corridor for either scheme

Table 2, Schedule of Impacts on Policies and Plans, Malton Bypass (at Brambling Fields) to Seamer Bypass (at Seamer Carr)

Off Line Route

This Off Line Route facilitates 5 policies and hinders 12. Impacts on other policies are neutral.

On Line Route

The On Line Route facilitates 5 policies and hinders 13. Impacts on other policies are neutral.

19.13 Summary of Section 2

19.13.1 Section 2 from Malton Bypass (at Brambling Fields) to Seamer Bypass (at Seamer Carr)

For both routes Policies facilitated by the scheme are related to the highway network and safety.

Those hindered by the Off Line Route relate to the natural environment, conservation, transportation, flooding and the Power Station at East Knapton.

The On Line Route is hindered by policies relating to the natural environment, conservation (a number of Internationally Important Nature Conservation Sites lie close to the proposed route near East Hesterton) and flooding.

Limitations and Assumptions of Section 2 from Malton Bypass (at Brambling Fields) to Seamer Bypass (at Seamer Carr)

Please see paragraph 2.3.6 above.

Potential Further Mitigation of Section 2 from Malton Bypass (at Brambling Fields) to Seamer Bypass (at Seamer Carr)

No further mitigation is thought appropriate in relation to scheme impacts on policies and plans.

19.14 Overall Summary

Road safety policy is facilitated along throughout the corridor, with highway network and transportation issues arising at a more local level.

Those policies hindered throughout the corridor concern issues related to the natural environment, conservation and flooding. In section 1 from York to Malton the corridor impacts on the environmental designations of the Howardian Hills AONB and the York Green Belt. In section 2 from Malton Bypass (at Brambling Fields) to Seamer Bypass (at Seamer Carr), the Off Line Route impacts to a greater extent on the Powerstation at East Knapton, whilst the On Line Route is closer to several Internationally Important Nature Conservation Sites

20 SUMMARIES AND CONCLUSIONS

20.1 Summaries from Individual Assessments

20.1.1 Air Quality

Compared to the 'do-minimum' scenario, all route corridors are likely to have a positive impact on nitrogen dioxide and particulate matter concentrations.

The receptors of air quality impacts are residents of local properties, who will be directly affected by the proposals.

Recreational areas particularly sensitive to traffic air borne pollutants have been identified as the race course south of Whitwell-on-the-Hill, a tennis court at Crambeck and the Glanton Golf Course.

It may be possible to mitigate short-term negative impacts during construction through traffic management schemes and good equipment maintenance.

There is likely to be a short-term deterioration in air quality during construction, where traffic management measures are in force.

Neither during construction nor operation is it likely that negative impacts will result in pollution levels higher than air quality objectives set out in the UK Air Quality Strategy.

20.1.2 Cultural Heritage

The proposals would cause a very high adverse impact on the cultural heritage of the area.

Where a route option impinges on a scheduled monument, Scheduled Monument Consent must be sought. Consent may not necessarily be granted and other route options which avoid damage must be considered.

The key impacts on cultural heritage are:

- Damage or destruction of buried archaeological remains (including scheduled sites such as the Roman pottery kilns and associated features at Crambeck)
- Potential damage or destruction of buried archaeological remains
- Damage or destruction to upstanding features, including listed buildings and a grade II* registered park.
- Mitigation of cultural heritage impacts involve:
- Further surveys to define more closely the archaeological resource (including geophysical surveys
- Trial trenching and test pitting),
- And thereafter, as appropriate, altering the road's route or full excavation and recording of archaeological sites.
- All cultural heritage impacts are permanent, perhaps with the exception of impacts on the setting of upstanding features which may, over time be mitigated through landscape treatment.

20.1.3 Disruption during Construction

The receptors of impacts include local residents, businesses, vehicle and other travellers, and the built and natural environment.

Impacts are moderate to high adverse for this issue. There are likely to be high adverse impacts on the surrounding road network due to the transportation of imported materials and moderate adverse impacts on access to agricultural land and public rights of way.

Mitigation to reduce impacts will include traffic management measures, protection of sensitive sites, advance drainage and pollution control measures and keeping construction traffic off the side roads.

20.1.4 Ecology and Nature Conservation

The route corridors overall have a moderate adverse ecological impact.
The key receptors of ecological impacts are likely to be:

- Loss of ancient woodland of county importance within Gillylees and Pretty Woods Site of Importance for Nature Conservation
- White-clawed crayfish, water vole
- Great crested newts
- Bat roosts in mature trees
- Hedgerows, woodland and grassland.
- Key impacts are likely to be:
- Potential pollution of watercourses
- Loss or fragmentation of habitat
- Disturbance during construction and operation
- Disruption of animal routeways.

20.1.5 Landscape Effects: Landscape Character

The route corridors overall have a moderate adverse impact on the landscape character. There is a wide range of receptors which make up landscape character including landform, tree cover, land cover and field pattern, boundary features, levels of activity, enclosure and complexity, and although the overall impact is moderate adverse the impacts on these individual features varies throughout the length of the route.

The routes pass through the Howardian Hills Area of Outstanding Natural Beauty, and there will be direct effects on it.

It may be possible to mitigate the impacts in certain areas when detailed design is carried out.

20.1.6 Landscape Effects: Visual Impact

Key impacts include increased visual impact from the widened route corridor and changes (both adverse and beneficial) due to changed vertical and horizontal alignment.

Key receptors are properties close to the existing A64 within the York to Malton section, and those within the Off Line route corridor.

Mitigation would include mounding, false cuttings, planting and fencing. Mitigation measures are designed with landscape effects, driver view and noise impacts in mind.

Impacts are negative overall however a beneficial effect will increase over time as planting matures.

There are opportunities for off-site planting, especially to screen views from Castle Howard.

20.1.7 Land Use: Demolition

Impacts for the York to Scarborough dualling consists of the possible demolition of 13 private properties.

Mitigation is by compensation. However, the impacts are adverse and long term. However this is a stage 1 environmental impact assessment and as more detailed plans are drawn up less properties may be affected.

20.1.8 Land Use: Community Land

The A64 Dualling scheme between York and Malton will not impact on any land used by the community. The online and offline route corridors between Malton and Seamer will not result in loss of land used by the community.

20.1.9 Land Use: Development Land

Land use development designations identified within the relevant local plans will not be affected by the section 1 route corridor and the online and offline route corridors for section 2. The On Line Route corridor has a potential adverse impact on future development especially within the villages of Rillington, Sherburn, Scagglethorpe and West Knapton in relation to the On Line Route. This route would also affect an application to extend to the west of West Heslerton Quarry for the extraction of sand.

The majority of the impacts associated with the offline route corridor for section 2 are adverse as it passes through an otherwise tranquil and rural area.

Impacts are likely to be long term.

20.1.10 Land Use: Agricultural Land

None of the proposals impact on ESA's but will affect farm units with Countryside Stewardship Schemes.

Section 1 involves constructing approximately 23 Kilometres of road through grade 3 agricultural land, but land take will be minimised as it is on line.

In relation to Section 2 the on line proposal will involve constructing approximately 6 Km of road through grade 2 agricultural land and 17 Km through grade 3 agricultural land.

The off line proposal will involve constructing approximately 7 Km of road through grade 2 agricultural land and 17 km through grade 3 agricultural land.

The key receptors are the farm businesses in the local area, and the national resource of agricultural land.

The key impacts are disruption during construction, loss of Grade 2 and Grade 3 agricultural land.

Impacts are generally adverse and long term.

20.1.11 Traffic Noise and Vibration

The route from York to Malton has a neutral impact due to the majority of the section route being online however both routes between Malton and Seamer offer beneficial impacts in terms of traffic noise and vibration.

The key impacts are temporary increase in noise and vibration levels during construction, and, during operation, changes in noise and vibration levels, both positive and negative, depending on location.

The key receptors are local people who, depending on the location of the proposed schemes, experience more or less traffic noise and vibration from their properties.

Mitigation measures to reduce noise impacts include mounding and acoustic screen fencing in particular locations. Some of the mounding also serves to reduce visual impacts.

20.1.12 Pedestrians, Cyclists, Equestrians and Community Effects

Impacts are adverse and do not improve the situation for rights of way users.

Key receptors are the occupants of properties adjacent to, or affected by, either the existing or proposed routes; and users of public rights of way.

Mitigation includes provision of new tracks for vulnerable users, diversion of public rights of way to make use of new safe crossing points.

Impacts are long term.

20.1.13 Vehicle Travellers: Driver View

Impacts vary according to the route corridors. Both the York to Malton and the Malton to Seamer Off Line route corridors has a neutral impact on Driver View whilst the On Line route has a beneficial impact.

Key impacts are mainly caused by measures introduced in mitigation of landscape, visibility and noise issues, including mounding, planting and false cuttings.

No specific mitigation is proposed, other than sensitive design of other mitigation measures keeping driver view issues in mind.

20.1.14 Vehicle Travellers: Driver Stress

The impacts associated with all the corridors are broadly similar in that there will be a reduction in driver stress once the new routes are in operation.

The key impacts on driver stress are fear, frustration and uncertainty.

The key receptors are people using the existing and proposed road system.

Mitigation measures include safe working systems and traffic control during construction. During operation, mitigation measures include quiet road surfacing and new signage.

During construction impacts will generally be adverse. Immediately after construction driver stress is likely to fall significantly. However if traffic volumes increase due to the road improvements, driver stress may increase again.

Most adverse impacts are experienced during construction.

20.1.15 Water Quality and Drainage

The effect on Water Quality and drainage overall is seen as a minor to negligible impact. Potential impacts could include:

- Changes to run off characteristics caused by vegetation and topsoil strip
- Increased risk of peak flows, inducing flooding or scouring of receiving waters
- Increased sediment loading especially during construction
- Reduction in oxygen in water due to increased oxygen demand
- Changes to river flora and fauna due to pollution or sediment load
- Disturbance to salmonid migration and populations
- Impacts on groundwater, borehole levels and surface ecosystems in areas of 'cut'
- Pollution of aquifers
- Changes to the capacity and characteristics of the flood plain
- The key receptors of water quality and drainage impacts are the River Derwent and tributaries candidate Special Area of Conservation (an internationally protected site), fisheries, groundwater, and the flood plains.
- Potential mitigation could include:
 - Containment methods
 - No in-channel construction works
 - Consultation with English Nature, Environment Agency, and fisheries organisation at an early stage
 - Follow Environment Agency Pollution Prevention Guidance
 - Use of vegetative drainage and pollution control measures
 - Use of filter drains and sediment traps
 - Use of interceptors and vortex discharge control at each outfall
 - Provide maintenance manual for use during operation of road

20.1.16 Geology and Soils

The effect on Geology and Soils overall is seen as a minor impact.

- The key receptors of impacts are:
 - The major and minor aquifer
 - Ground water protection zone within the Malton to Seamer Carr area
 - The SSSI site along side the On Line Route
 - No designated sites such as Regionally Important Geological and Geomorphological Sites (RIGS) are affected by the proposals.
- Potential impacts include:
 - Pollution of aquifer and ground water protection zone through spillages during construction and operation
 - Pollution due to drilling of boreholes

20.1.17 Policies and Plans

Overall the routes hinder more policies than they facilitate.

Most beneficial impacts are in relation to road safety, highway network, and modal conflict (between York and Malton)

Most adverse impact are in relation to environmental issues, conservation and flooding (between Malton and Seamer).

20.2 Conclusions

20.2.1 Summary of Key Issues

The key environmental issues relation to this scheme appear to be Cultural Heritage, Landscape Character and Ecology.

However the main issue in relation to this scheme is Cultural Heritage. This issue is considered particularly sensitive because of the high level of statutory protection of a wide range of sites, buildings and areas, and the very large quantity of known and potential sites. Also the proposed impact of the route corridors will affect irreplaceable resources.

20.2.2 Conclusion

In relation to environmental standards the two schemes identified by Steer Davis Gleave do in the majority of issues appear robust however there is sensitivity in relation to Landscape Character and Ecology, and a possible severe adverse impact in relation to Cultural Heritage.

20.2.3 Limitations of Study

This study has been carried out based on a level of design appropriate to a Stage 1 assessment. The exact location of the route is not accurately be determined at this stage. As a consequence, the level of design information available limits some assessments. Further studies would be required at Stage 2 to determine exact impacts. This limitation is not thought to have prevented the objective of the Stage 1 from being achieved.