2.0 ENVIRONMENTAL IMPACT ASSESSMENT METHODOLOGY

Introduction

2.1 This chapter explains the EIA methodology. In particular, it details the process of identifying and assessing the likely significant environmental effects of the Proposed Development.

General Approach

2.2 The ES has been prepared in accordance with the EIA Regulations (Ref. 2.1) which implement European Council Directive 2011/92/EU (codified Directive on EIA) (Ref. 2.2). Reference has also been made to currently available good practice guidance on EIA including:

- Environmental Impact Assessment – A Guide to Procedures, Department of the Environment, Transport and Regions (DETR) 2000 (Ref. 2.3);
- Environmental Impact Assessment, DETR Circular 02/99 (Ref. 2.4);
- Guidelines for Environmental Impact Assessment, Institute of Environmental Management and Assessment (IEMA) 2004 (Ref 2.5);
- Amended Circular on Environmental Impact Assessment – A Consultation Paper, Department for Communities and Local Government (DCLG) (June 2006) (Ref. 2.6);
- Environmental Impact Assessment: A Guide to Good Practice and Procedures, A Consultation Paper, DCLG (June 2006) (Ref. 2.7); and
- Office for the Official Publications of the European Communities (1999) Guidelines for the Assessment of Indirect and Cumulative Impacts as well as Impact Interactions, Luxemburg (Ref. 2.8).

Scoping

2.3 Scoping involves focusing the content of the ES on those issues of greatest potential significance. It is an important tool for identifying the likely significant effects of a proposed development through its design, construction and operation and decommissioning phases and ensures that appropriate mitigation options are considered, where necessary.

2.4 A scoping request specifically for this Proposed Development has not been sought. The Applicant has voluntarily undertaken an EIA. A request for an EIA scoping opinion for a related scheme called the Ebberston to Knapton Pipeline was submitted to North Yorkshire County Council (NYCC) on 6th February 2012 and the NYMNPA on 21st March 2012. The

scoping requests considered that the following environmental issues should be addressed in detail in the ES:

- Ecology;
- Landscape and Views;
- Air Quality;
- Noise and Vibration;
- Transport;
- Flood Risk, Hydrology and Drainage;
- Archaeology and Cultural Heritage;
- Socio Economics; and
- Ground Conditions and Contamination.

2.5 NYCC adopted a scoping opinion on 2nd July 2012 and NYMNPA adopted a scoping opinion on 13th April 2012, both of which generally agreed with the scope set out above for the EIA relating to the Ebberston to Knapton Pipeline (see **Appendix 2.1).** As some of the elements of the Ebberston to Knapton Pipeline scheme are common to the Proposed Development (i.e. gas production from the existing Ebberston Moor 'A' Well Site), coupled with the fact that there is overlap between the Assessment Site boundaries, the Applicant decided to base the scope of this Proposed Development on the adopted scoping opinions from NYCC and NYMNPA.

2.6 A table setting out the issues raised in the scoping opinions and where these have been addressed within the ES is provided in **Appendix 2.2**.

Consultation Process

Consultees

2.7 The following organisations were approached as part of the EIA process to identify baseline information and to enable the Proposed Development to be refined in relation to environmental issues raised, where appropriate:

- NYMNPA (various departments);
- North Yorkshire County Council (NYCC);
- Ryedale District Council (RDC);
- English Heritage;
- Environment Agency;
- Natural England;

- Yorkshire Wildlife Trust; and
- Yorkshire Water

Public Exhibition

2.8 The Applicant carried out a public exhibition on 7th June in Allerston Village Hall. The exhibition described the nature and purpose of the Proposed Development. Leaflets advertising the exhibition were posted prior to the public exhibition to local households and businesses, posters were place on notices boards and other prominent places in the local area and an advertisement was placed in the local media. The issues raised at the public exhibitions and responses, together with the design evolution, are discussed in the Statement of Community Involvement. Involvement with the local community will continue throughout the planning process.

Assessment Methodology

2.9 The EIA Regulations (Ref. 2.1) stipulate that an ES should, where possible, identify, describe and assess the likely significant effects of a development on the environment. Therefore, this ES identifies and assesses the likely significant effects of the Proposed Development in relation to construction, operation, and decommissioning and restoration phases. Environmental effects have been evaluated with reference to definitive standards and legislation where available. Where it has not been possible to quantify effects, qualitative assessments have been carried out, based on available knowledge and professional judgement. Where uncertainty exists, this has been noted in the relevant assessment chapter.

Determining Significance

2.10 Guidance on significance has been mainly of a generic nature (e.g. DETR Circular 02/99 (Ref. 2.4) and DCLG draft Amended EIA Circular (Ref. 2.6)), and practitioners have been obliged to develop definitions for specific topics and projects. It is broadly accepted, however, that significance reflects the relationship between two factors:

- The sensitivity, importance or value of the affected resource or receptor; and
- The magnitude or severity of an effect (i.e. the actual change taking place to the environment).

2.11 The sensitivity, importance or value of the resource or receptor is normally derived from:

- Legislative controls;
- Designated status within the land use planning system;
- The number of individual receptors such as residents;
- An empirical assessment on the basis of characteristics such as rarity or condition; and
- Ability of the receptor to absorb change.

2.12 The magnitude of an effect is often quantifiable in terms of, for example the extent of land take or predicted change in noise levels.

2.13 Determination of significance also includes consideration of:

- Extent and magnitude of the effect;
- Type of effect (beneficial or adverse);
- Duration of effect (whether short, medium or long term; permanent or temporary);
- Nature of effect (whether direct or indirect, reversible or irreversible);
- Whether the effect occurs in isolation, is cumulative or interactive;
- Performance against environmental quality standards or other relevant pollution control thresholds; and
- Compatibility with environmental policies.

2.14 Significant effects occur where valuable or sensitive resources, or numerous receptors, are subject to effects of considerable magnitude. Effects are unlikely to be significant where low value or non-sensitive resources, or a small number of receptors, are subject to minor effects. Allocation of significant effects in intermediate situations will be a matter for professional judgement in each topic area.

2.15 Where an effect is considered to be significant, this significance will generally be classified as major, moderate or minor (with these descriptions again being based on precedent or current guidance). Within this ES, the significance matrix in **Table 2.1** has been used to define the level of significance of effects. In some cases analogous matrices for the various specialist topics are used, and where these use different assessment criteria this is clearly stated within the relevant chapter.

Table 2.1: Significance Matrix

Sensitivity /Value of Receptor	Magnitude of Effect		
	High	**Medium**	**Low**
High (England, UK, International)	Major	Major/Moderate	Moderate
Medium (County, Regional)	Major/Moderate	Moderate	Moderate/Minor
Low (Local, Borough)	Moderate	Moderate/Minor	Minor

2.16 The three levels of significance defined by the generic matrix are:

- Major – an effect which in isolation could have a material influence on the decision making process;
- Moderate – an effect which on its own could have moderate influence on decision making, particularly when combined with other similar effects; or
- Minor – an effect which on its own is likely to have a minor influence only on decision making but when combined with other effects could have a more material influence.

2.17 Effects are also described as:

- Adverse – detrimental or negative effects to an environmental resource or receptor; or
- Beneficial – advantageous or positive effect to an environmental resource or receptor.

2.18 Where an effect is considered to be not significant or have no influence, irrespective of other effects, this is classified as “negligible”.

2.19 Each of the technical chapters or accompanying technical appendices provides the criteria, including sources and justifications, for quantifying the different levels of effect. Where possible, this has been based upon quantitative and accepted criteria, together with the use of value judgements and expert interpretations to establish to what extent an effect is likely to be environmentally significant.

2.20 In the context of the Proposed Development, short to medium term temporary effects are considered to be those associated with construction, and long term or permanent effects are those associated with the operation or decommissioning/restoration of the Proposed Development.

2.21 Local effects are those on receptors in and around the Assessment Site, while effects upon receptors in North York Moors National Park are considered to be at National Park Authority level. Effects on the North East region are considered to be at a Regional level, whilst effects

on England are considered to be at an England level and national effects are considered to be at a UK level. No effects have been identified at an international level.

Cumulative and Interactive Effects

Cumulative Effects

2.22 A requirement of the EIA Regulations is to assess cumulative effects as part of the EIA. Cumulative effects are generally considered to arise from the combination of effects from the Proposed Development and from other proposed or permitted schemes in the vicinity, acting together to generate elevated levels of effects. Circular 02/99 (Ref. 2.4) identifies that:

> ***"in judging whether the effects of a development are likely to be significant, local planning authorities should always have regard to the possible cumulative effects with any existing or approved development..."***

2.23 The scheme that has been covered as part of the cumulative effects assessment is set out in **Table 2.2** and shown on **Figure 2.1**.

Table 2.2: Cumulative Schemes

Scheme	Description
Ryedale Gas Project (NY/2010/0159/ENV)	The Ryedale Gas Project includes five principal elements: • Gas production from the existing Ebberston South Well Site; • The construction of two underground pipelines from the existing Ebberston South Well Site to a new Gas Processing Facility; • A new access road between the A170 and the proposed Gas Processing Facility; • A Gas Processing Facility at Hurrell Lane, Thornton-le-Dale; and • An Above Ground Installation (AGI) connection into the existing National Transmission System (NTS) pipeline to the south of the Gas Processing Facility on land off New Ings Lane.

2.24 Each of the technical assessments take into account the likely significant cumulative effects of the Proposed Development with the Ryedale Gas Project in accordance with the significance matrix set out in **Table 2.2**. The level of detail of assessment has been dependent on the information available for the scheme and has generally been undertaken in a qualitative manner. Where no cumulative effects are predicted, this has also been stated.

Interactive Effects

2.25 Interactive effects are also considered in the ES. Interactive effects arise where effects from one environmental element bring about changes in another environmental element. These effects are also reviewed in each of the technical chapters of this ES. Examples of the main potential types of interactive effects are as follows:

- Effects of traffic on noise;
- Effects of traffic on air quality;
- Effects of water discharges on ecology; and
- Effects of landscaping on ecology.

Structure of Technical Chapters

2.26 Through the EIA process, the likely significant environmental effects of the Proposed Development will be assessed. Each key environmental topic has been assigned a separate chapter (in no particular order) in the ES (Chapters 7 - 15), and within each of these chapters the information that will inform the EIA process has been set out in the following way:

- **Introduction** – a brief summary of what is considered in the chapter;
- **Planning Policy Context** – a review of relevant National and Development Plan Document (DPD) policies related to the technical issues;
- **Assessment Methodology** – an outline of the methods used to undertake the technical studies with reference to legislation, published standards, guidelines, best practice and any relevant significance criteria;
- **Baseline Conditions** – a description of the environmental conditions against which the likely significant environmental effects of the Proposed Development have been assessed;
- **Likely Significant Effects** – identification and assessment of the likely significant environmental effects of the Proposed Development during construction, operation and decommissioning and restoration;
- **Mitigation Measures** – development of measures to avoid, offset or reduce the significant adverse effects of a project. These measures can relate to any of the phases of the project: design, construction, operation, decommissioning and restoration. Where any significant adverse environmental effects have been identified, a commitment is made by the Applicant to implement mitigation measures;
- **Residual Effects** – identification of the remaining effects of the Proposed Development, assuming implementation of available mitigation measures, and includes an assessment

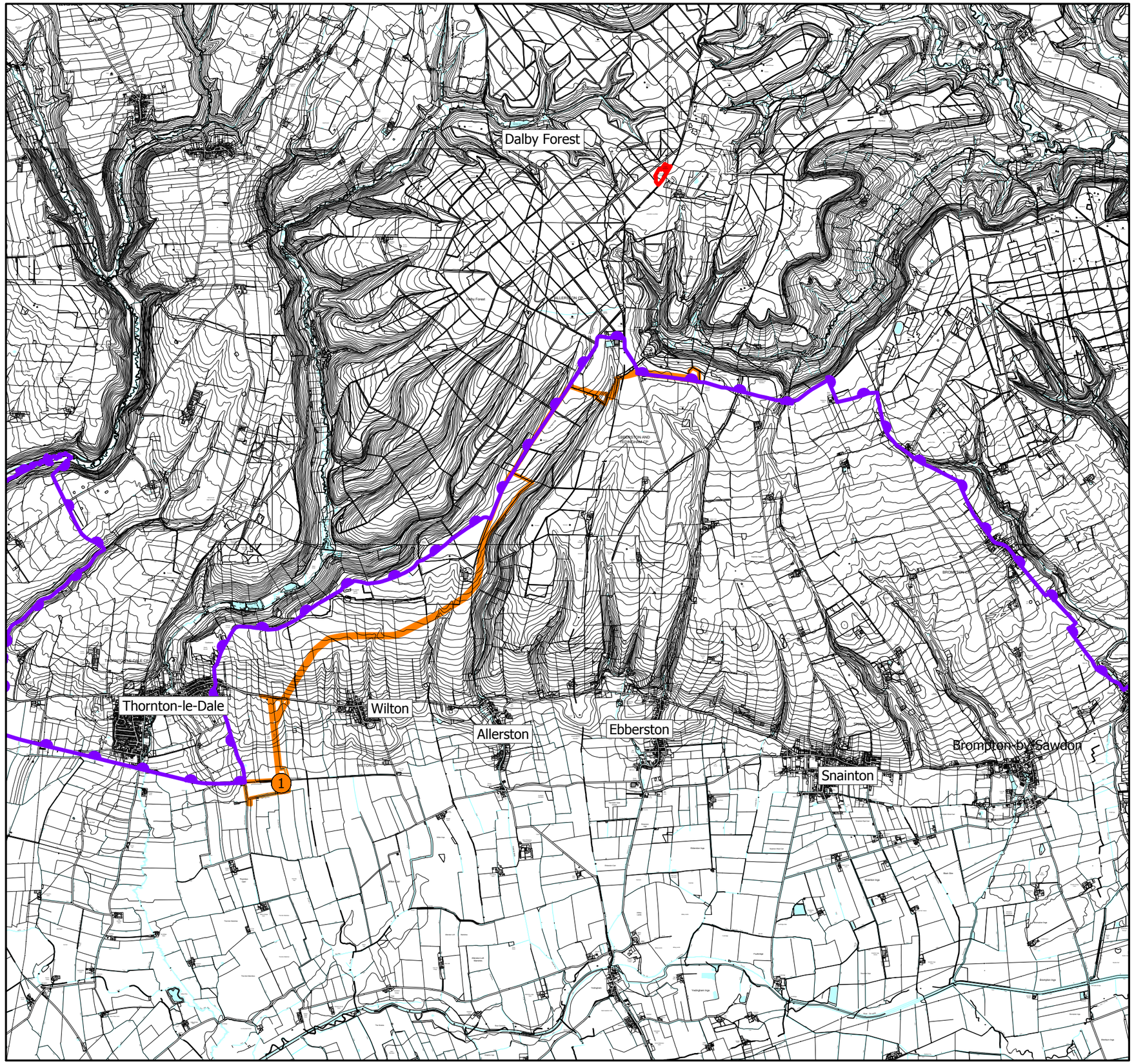
of the significance of those effects in accordance with the criteria set out in paragraphs 2.10 – 2.21; and

- **Summary** – a summary of the key finding of the ES chapter.

Assumptions and Limitations

2.27 The principal assumptions that have been made and any limitations that have been identified, in preparing this ES are set out below. Assumptions relevant to specific topics have been made in the appropriate chapter:

- All of the principal existing land uses adjoining the Assessment Site remain;
- Information received by third parties is complete and up to date;
- The design, construction, operation, decommissioning and restoration phases of the Proposed Development will satisfy minimum environmental standards, consistent with contemporary legislation, practice and knowledge;
- It is anticipated that construction would commence in January 2014 (subject to gaining planning permission) and is scheduled for completion in July 2014;
- Significant environmental effects have been assessed using the design of the Proposed Development;
- Conditions will be attached to the planning permission that will control disturbance during construction works;
- Necessary off-site services infrastructure will be provided by statutory undertakers;
- The planning permission, when granted, will contain conditions that will be sufficient to limit the development to that which has been assessed in the EIA;
- The side track from the existing borehole permitted under NYM/2013/0068/FL will be drilled prior to construction of the Proposed Development. Any future drilling other than that included within this existing planning permission will be assessed as part of separate planning applications and therefore is not covered in this ES;
- Separate planning permission will be sought to use the existing well cellar to drill a borehole for water disposal use, if required at a later date; and
- Any future development of the Ebberston Moor 'A' Well Site or Lockton Compound after operation of the Proposed Development will be determined through a separate planning application and will not be assessed within this ES.



The scaling of this drawing cannot be assured

Revision	Date	Drn	Ckd
-	-	-	-

N

LEGEND

- Assessment Site Boundary
- Boundary of North York Moors National Park
- Cumulative Schemes
  1. Ryedale Gas Project (NY/2010/0159/ENV)

Figure 2.1

Project
Ebberston Moor EDS, North Yorkshire

Drawing Title
Cumulative Sceme

Date	Scale	Drawn by	Check by
03.07.2013	1:50,000 @A3	ML	MC

Project No	Drawing No	Revision
19819	E004	A

0 500 1000 1500 2000 2500m

BARTON WILLMORE

Planning • Master Planning & Urban Design
Architecture • Landscape Planning & Design • Project Services
Environmental & Sustainability Assessment • Graphic Design

bartonwillmore.co.uk

Offices at Reading London Bristol Cambridge Cardiff Ebbsfleet Edinburgh Leeds Manchester Solihull

Reproduced from the Ordnance Survey Map with the permission of the Controller of HMSO. Crown Copyright Reserved. Licence No 100019279.

K:\19000-19999\19800-19899\19819 - Knapton\A4 - Dwgs & Registers\EIA\19819 E004 Cumulative Scheme.dwg - A3