

CONTENTS

15.0 LAND USE, AGRICULTURE AND SOCIO-ECONOMICS	2
15.1 Introduction	2
15.2 Legislation and Planning Policy Context	2
15.3 Assessment Methodology and Significance Criteria	5
15.4 Baseline Conditions	16
15.5 Development Design and Impact Avoidance.....	25
15.6 Likely Impacts and Effects.....	26
15.7 Mitigation and Enhancement Measures	35
15.8 Limitations or Difficulties.....	35
15.9 Residual Effects and Conclusions.....	36
15.10 References	38

TABLES AND PLATES

Table 15.1: National planning policy relevant to soils and agricultural land use assessment	2
Table 15.2: Classification of land use effects.....	5
Table 15.3: Sensitivity of agricultural land.....	6
Table 15.4: Magnitude of impact on agricultural land.....	7
Table 15.5: Sensitivity of soil resources.....	7
Table 15.6: Magnitude of impact on soil resources.....	8
Table 15.9: Classification of effects on agricultural land use, soils and socio-economics	9
Table 15.10: Consultation summary table	11
Table 15.11: Summary of key changes to Chapter 15 since publication of the PEI Report.....	15
Table 15.12: Existing land uses within the Site	16
Table 15.13: Summary of ALC Survey Results	19
Plate 15.1: Population age structure	20
Plate 15.2: Population qualifications.....	20
Table 15.14: Employment sectors	21
Table 15.15: Economic activity.....	22
Plate 15.3: Workforce occupations	23
Table 15.16: Population growth.....	24
Plate 15.4: Sought after occupations.....	25
Table 15.17: Construction effects on existing land uses within the Site	27
Table 15.18: Net construction employment in York TTWA (average no. of workers on site per year) .	32
Table 15.19: Net deadweight employment of existing coal-fired power station	33
Table 15.20: Net employment of the Proposed Development in operation	34
Table 15.21: Summary of significant effects	37

15.0 LAND USE, AGRICULTURE AND SOCIO-ECONOMICS

15.1 Introduction

15.1.1 This chapter of the Environmental Statement (ES) addresses the potential effects of the Proposed Development near Eggborough, North Yorkshire on land use, agriculture, employment, local businesses and the local population.

15.2 Legislation and Planning Policy Context

Planning Policy Context

National Planning Policy

15.2.2 The planning context for the consideration of agricultural land and soil resource issues is provided primarily by national policies for development involving agricultural land, as set out in the National Planning Policy Framework (NPPF) (Department for Communities and Local Government (DCLG), (2012). This policy advice is predicated upon principles of sustainable development and requires land use decision makers to take account of the need to protect, and make prudent use of, natural resources. Consequently, it is necessary to have regard to the qualities of the agricultural land and soils within the Site.

15.2.3 Where it is demonstrated that significant development on agricultural land is necessary, and the options of utilising previously developed land or poorer quality land are not available or are inappropriate, decision makers are required to have regard to the economic and other benefits of the best and most versatile (BMV) agricultural land (Grades 1, 2 and 3a).

Table 15.1: National planning policy relevant to soils and agricultural land use assessment

Policy reference	Content
NPPF (DCLG, 2012a) and associated Planning Practice Guidance (PPG) (DCLG, 2012b)	
NPPF Paragraph 109: Conserving and Enhancing the Natural Environment	States that the planning system should contribute to and enhance the natural and local environment by protecting and enhancing valued landscapes, geological conservation interests and soils.
NPPF Paragraph 111 and PPG ID8: Natural Environment (Brownfield Land, Soils and Agricultural Land)	State that <i>“planning policies and decisions should encourage the effective use of land by re-using land that has been previously developed (brownfield land), provided that it is not of high environmental value.”</i>
NPPF Paragraph 112 and PPG ID8: Natural Environment (Brownfield Land, Soils and Agricultural Land)	Paragraph 112 requires local planning authorities to take into account the economic and other benefits of the best and most versatile (BMV) agricultural land. Where significant development of agricultural land is demonstrated to be necessary, local planning authorities should seek to use areas of poorer quality land, in preference to that of a higher quality.

Policy reference	Content
Department for Environment, Food and Rural Affairs (Defra) guidance	
Soil Strategy for England – Safeguarding our Soils (Defra, 2009a)	This sets out Defra’s vision that by 2030, all of England's soils will be managed sustainably and degradation threats will be tackled successfully in order to improve soil quality and safeguard the ability to provide essential services for future generations. The Strategy sets out priorities for action in respect of better protection of agricultural soils; protecting and enhancing stores of soil carbon; building the resilience of soils to a changing climate; preventing soil pollution; effective soil protection during construction and development; and dealing with the legacy of contaminated land.
Construction Code of Practice for the Sustainable Use of Soils on Construction Sites (Defra, 2009b)	This is a practical guide to assist the construction industry to protect the soil resources with which it works and achieve good soil management at all stages of the construction process. It advises that the protection, use and movement of soil should be considered from the outset of a development project's planning, through its design and construction phases and on into future maintenance and operation. The code provides practical guidance on the following aspects of the sustainable use of soils on construction sites: <ul style="list-style-type: none"> • identifying existing soil resources on site; • on-site soil management; • topsoil and subsoil stripping; • soil stockpiling and placement; • sourcing, importing and manufacturing topsoil; • soil aftercare; and • uses for surplus topsoil.

15.2.4 The NPPF states that planning should proactively drive and support sustainable economic development. The NPPF requires local authorities to set out a clear economic vision and strategy for their area which encourages sustainable economic growth. Local authorities are also required to identify strategic sites for local and inward investment. The NPPF also requires local authorities to support existing business sectors and consider whether they are expanding or contracting.

Local Planning Policy

15.2.5 In the Proposed Development Study Area (defined in paragraphs 15.3.20-24 below), planning policy regarding land use and socio-economics are made by Selby District Council.

15.2.6 Land use policy is described in Chapter 7: Legislative Context and Planning Policy Framework. Policy relating to socio-economics is described in further detail below.

Selby District Local Plan ‘Saved Policies’ (2005)

15.2.7 The Local Plan suggests that Selby’s economy has traditionally been focussed on industrialised forms of employment such as coal mining and power generation but that it is increasingly important to *“stimulate economic development in a way which is compatible with environmental objectives”*. It supports the creation of new employment opportunities and inward investment with importance placed on the retention of established employment areas. Key objectives of the Local Plan include:

- safeguarding existing employment land;
- promoting the diversification of the local economy; and
- creating opportunities to improve the quality of the existing business environment.

15.2.8 Policy EMP11 of the Local Plan indicates that large-scale industrial development may be permitted provided that it would result in *“substantial employment or other economic benefits”*.

Selby District Core Strategy Local Plan (2013)

15.2.9 A key objective of the Core Strategy is to promote economic prosperity. This is highlighted as important in reducing out-commuting and creating a more sustainable way of life for residents. It aims to *“cater for inward investment as well as indigenous employment growth”*, with emphasis placed on retaining existing employment sites in the District. Selby District Council also supports the re-use of former employment sites.

15.2.10 The Core Strategy indicates that the energy sector will continue to play an important role in the economy of the District. It highlights Eggborough Power Station as a major employer which contributes to the national energy infrastructure as well as the local economy but recognises that it also has the potential for the future development of renewable and low carbon energy technologies. The Core Strategy suggests that *“there is a need for further investment in energy infrastructure in line with national policy as a prominent contributor to economic prosperity”* and *“supporting the energy sector will assist in reinvigorating, expanding, and modernising the District’s economy”*.

Other Guidance

15.2.11 Whilst there is no dedicated UK legislation that details the content required for a socio-economic assessment as part of an EIA, the socio-economic assessment presented in this chapter is based upon a range of relevant guidance. This includes:

- Department for Business, Innovation and Skills (BIS) (2009) Research to Improve the Assessment of Additionality;
- HM Treasury (2011) The Green Book – Appraisal and Evaluation in Central Government;
- HM Treasury (2011) The Magenta Book – Guidance for evaluation; and
- Homes & Communities Agency (HCA) (2014) Additionality Guide (4th Edition).

15.3 Assessment Methodology and Significance Criteria

15.3.1 This assessment considers the impacts of the Proposed Development on existing land uses, agricultural land and soils within the Site, and the role of the Proposed Development in the generation of direct and indirect employment opportunities at the local and regional level.

Impact Assessment and Significance Criteria

Land Use Impact Assessment

15.3.2 Impacts on land uses may be direct or indirect. This chapter considers only direct impacts on land uses. The significance of any indirect effects on surrounding land uses, such as noise, dust, water quality, visual and traffic effects, are discussed in the relevant specialist chapters and are not repeated in this chapter.

15.3.3 The significance of an effect on a land use (with the exception of agricultural land, which is assessed separately as described in the next section) is assessed using the definitions in Table 15.2 and professional judgement. This methodology has been developed and used by AECOM for a number of similar land use impact assessments and deviates from the standard EIA methodology used elsewhere in this ES, as effects are classified on the basis of the definitions in Table 15.2 rather than by combining receptor sensitivity and impact magnitude with a matrix.

Table 15.2: Classification of land use effects

Effect	Definition
Major adverse	Demolition of a large number of buildings or structures in beneficial use. Use of large areas of previously undeveloped (greenfield) land. Severance/ loss or large diversion of a formal PRoW. Large loss of formal recreational areas or other beneficial uses.
Moderate adverse	Demolition of a small number of buildings or structures in beneficial use. Use of some areas of previously undeveloped (greenfield) land. Severance/ loss or large diversion of an informal pedestrian or cycle route, or a moderate diversion of a formal PRoW. Small loss of formal recreational areas or other beneficial uses.
Minor adverse	Relatively small changes to informal or formal pedestrian or cycle routes. Loss of informal recreational areas or other beneficial uses.
Negligible adverse	Very small changes to informal or formal pedestrian or cycle routes. Loss of beneficial uses (e.g. woodland) with no public access.
Negligible beneficial	Very small improvement to informal or formal pedestrian or cycle routes. Increase in provision of beneficial land uses (e.g. woodland) with no public access.
Minor beneficial	Relatively small improvements to informal or formal pedestrian or cycle routes. Increase in provision of informal recreational areas or other

Effect	Definition
	beneficial uses.
Moderate beneficial	Refurbishment of a small number of buildings currently not in beneficial use. Use of some areas of previously developed (brownfield) land. Large improvements to an informal pedestrian or cycle route, or moderate improvements to formal routes. Small increase in provision of formal recreational areas or other beneficial uses.
Major beneficial	Refurbishment of a large number of buildings currently not in beneficial use. Use of large areas of previously developed (brownfield) land. Notable improvements to a formal PRoW. Large increase in provision of formal recreational areas or other beneficial uses.

15.3.4 Effects are only considered to be significant if they are assessed to be major or moderate adverse or beneficial.

Agricultural Land and Soils Impact Assessment

15.3.5 The agricultural land and soils impact assessment has been completed based on the result of an Agricultural Land Classification and Soil Resources study conducted in March 2017 (Appendix 15A - ES Volume III). The assessment methodology used in the assessment is set out below.

15.3.6 Agricultural land in England and Wales is graded between 1 and 5, depending on the extent to which physical or chemical characteristics impose long-term limitations on agricultural use. Grade 1 land is excellent quality agricultural land with very minor or no limitations to agricultural use, and Grade 5 is very poor quality land, with severe limitations due to adverse soil, relief, climate or a combination of these. Grade 3 land is subdivided into Subgrade 3a (good quality land) and Subgrade 3b (moderate quality land). The BMV agricultural land comprises Grades 1, 2 and 3a.

15.3.7 The sensitivity of agricultural land is assessed according to its grade within the Agricultural Land Classification (ALC) system, as set out in Table 15.3.

Table 15.3: Sensitivity of agricultural land

Sensitivity	Agricultural land
High	Grade 1, excellent quality agricultural land
Medium	Grade 2 and Subgrade 3a, very good to good quality agricultural land
Low	Subgrade 3b and Grade 4, moderate to poor quality agricultural land
Very low	Grade 5, very poor quality agricultural land

15.3.8 The thresholds for the magnitude of impact adopted in the agricultural land assessment have regard to Natural England's Technical Information Note 049 'Agricultural Land Classification: protecting the best and most versatile agricultural land' (Natural England, 2012), which

indicates that proposed developments affecting 20 ha or more of best and most versatile land require formal consultation with Natural England (see Table 15.4).

Table 15.4: Magnitude of impact on agricultural land

Magnitude of impact	Agricultural land
High	The development would lead to the loss of over 50 ha of agricultural land
Medium	The development would lead to the loss of between 20 ha and 50 ha of agricultural land
Low	The development would lead to the loss of between 5 ha and 20 ha of agricultural land
Very low	The development would lead to the loss of less than 5 ha of agricultural land

15.3.9 The impact on the soil resource is assessed according to the degree to which disturbed soil resources are re-used in a manner that enables the resource to fulfil one or more of the primary soil functions of:

- the production of food and biomass, and the provision of raw materials;
- the storage, filtration and cycling of water, carbon and nitrogen in the biosphere;
- the support of ecological habitats and biodiversity;
- support for the landscape;
- the protection of cultural heritage; and
- the provision of a platform for human activities, such as construction and recreation.

15.3.10 The sensitivity of the soil resource reflects its textural characteristics and its susceptibility to the effects of handling during construction and the re-instatement of land, as shown Table 15.5.

Table 15.5: Sensitivity of soil resources

Sensitivity	Soil resource
High	Soils with high clay and silt fractions (clays, silty clays, sandy clays, heavy silty clay loams and heavy clay loams)
Medium	Silty loams, medium silty clay loams, medium clay loams and sandy clay loams
Low	Soils with a high sand fraction (sands, loamy sands, sandy loams and sandy silt loams)

15.3.11 The criteria for assessing the magnitude of impact are set out in Table 15.6.

Table 15.6: Magnitude of impact on soil resources

Magnitude of impact	Agricultural land
High	The soil displaced from the development is unable to fulfil one or more of the primary soil functions
Medium	The soil displaced from the development mostly fulfils the primary soil functions off-site or has a reduced capacity to fulfil the primary functions on site
Low	The soil displaced from the development mostly fulfils the primary soil functions on-site
Very low	The soil retains its pre-existing functions on-site

15.3.12 Effects are classified as negligible, minor, moderate or major (adverse or beneficial) in accordance with the matrix at Table 15.9, based on the sensitivity of the resource or receptor and the magnitude of impact. For the purposes of this assessment, only moderate and major impacts are considered 'significant'.

Socio-Economic Impact Assessment

15.3.13 Where possible, socio-economic impacts have been appraised against relevant national standards, such as those provided by HM Treasury, Business, Energy and Industrial Strategy, and the Homes and Communities Agency. Where relevant standards do not exist, professional experience and expert judgement have been applied.

15.3.14 The socio-economic assessment determines the:

- sensitivity of receptors;
- magnitude of impacts; and
- the consequent significance of effects.

15.3.15 The sensitivity of socio-economic receptors is assessed as high, medium, low or very low. The socio-economic receptors include those who will potentially benefit from employment generation (either directly, indirectly or induced (secondary impacts, for example due to construction workers spending money at local businesses)). The sensitivity of these receptors is considered to be high due to the availability of labour and skills in the local area required for the Proposed Development.

15.3.16 Section 15.4 Baseline Conditions summarises the receptors that will be affected during construction and operation.

15.3.17 The magnitude of the effects of the Proposed Development is assessed as being high, medium, low or very low. This is determined by:

- extent of change - the absolute number of people affected and the size of area in which effects will be experienced i.e. the level of change to baseline conditions including the proportion of the existing workforce;
- scale of the impact - the relative magnitude of each impact in its relevant market context (for example, the effects on local employment will be considered in the context of the overall size of the local labour market); and
- duration of impact - more weight is given to long-term, permanent changes than to short-term, temporary ones, where temporary and short-term impacts are considered to be

those associated with the construction works (three years or less), and medium to long-term impacts are those associated with the operation of the Proposed Development (25 years or more).

15.3.18 The effects of the Proposed Development are defined as either:

- beneficial - an advantageous or beneficial effect on an impact area;
- negligible - an imperceptible effects on an impact area; or
- adverse - a disadvantageous or negative effect on an impact area.

15.3.19 Where an effect is assessed as being beneficial or adverse, the effect has been classified as minor, moderate, major or negligible. The assessment of significance is informed by the sensitivity of the receptor and the magnitude of impact as set out in Table 15.9. For the purposes of this assessment, only moderate and major impacts are considered 'significant'.

Table 15.9: Classification of effects on agricultural land use, soils and socio-economics

Magnitude of impact	Sensitivity/ importance of receptor			
	High	Medium	Low	Very low
High	Major	Major	Moderate	Minor
Medium	Major	Moderate	Minor	Negligible
Low	Moderate	Minor	Negligible	Negligible
Very low	Minor	Negligible	Negligible	Negligible

Key Parameters for Assessment

15.3.20 The Rochdale Envelope (i.e. the maximum parameters for the Proposed Development and in particular its main buildings and structures) does not affect this assessment because:

- the land use and agricultural assessment assumes a worst case in terms of the extent of land required for the construction and operation of the Proposed Development; and
- technological changes in the design of the Proposed Development and variations in building size or layout within the defined parameters and limits of deviation included in the draft DCO are not likely to change socio-economic impacts, as the variations maintained within the project design do not affect the number or type of jobs and benefits generated by the Proposed Development.

Extent of Study Area

Land Use and Agriculture Study Area

15.3.21 The land use and agricultural assessment study area, which considers only direct impacts as a result of the Proposed Development, comprises the Site itself and immediately adjacent land. Indirect impacts on neighbouring land uses (such as noise, air quality, dust, visual and traffic effects) are discussed in the relevant technical chapters and not repeated in this chapter.

Socio-Economic Study Area

- 15.3.22 ONS statistical geographies have been used to define the study area for the socio-economic assessment as described below.
- 15.3.23 The Proposed Development falls within Lower Super Output Area (LSOA) Selby 010B (the 'Direct Impact Area'). LSOAs are small geographic areas defined by the ONS. There are 34,753 LSOAs across England and Wales with a minimum population of 1,000 and a maximum of 3,000.
- 15.3.24 As well as understanding the socio-economic conditions immediately surrounding the Proposed Development (as per the LSOA analysis), the socio-economic assessment also takes into account the principal labour market catchment area of the travel to work area (TTWA). TTWAs contain at least 75% of the area's workforce that both live and work in the area. TTWAs have populations of at least 3,500 people. The Proposed Development falls within the York TTWA (the 'Wider Impact Area').
- 15.3.25 The assessment outlines the socio-economic context of both the LSOA and TTWA, and makes comparisons to the whole of England. Key indicators include: population and labour force; skills and unemployment; industry and the economy.

Sources of Information/Data

- 15.3.26 Information on land uses within the Site has been gathered through a combination of a desk study of available maps and site visits.

Land Use and Agriculture Sources

- 15.3.27 To inform the land use and agricultural impact assessment, a soil survey was undertaken in December 2016/ January 2017 to classify the agricultural land located within the Proposed Cooling Water and Gas Connection corridors in accordance with the ALC system to determine the extent of best and most versatile land (BMV) affected by the Proposed Development. The soil survey is contained within Appendix 15A (ES Volume III) and the results from the survey are 10 summarised in this chapter.

Socio-Economic Sources

- 15.3.28 The following Office for National Statistics (ONS) datasets have been reviewed to inform the assessment: Business Register and Employment Survey (BRES) (2015); Jobseeker's Allowance by Occupation (2016); Census of Population (2011); and Population Projections (2015).

Consultation

- 15.3.29 Comments on the scope of the proposed land use, agriculture and socio-economics assessment have been provided within the Planning Inspectorate's EIA Scoping Opinion and through meetings and consultation as summarised in Table 15.10 below.

Table 15.10: Consultation summary table

Consultee	Date (method of consultation)	Summary of consultee comments	Summary of response/ how comments have been addressed
Natural England	Email communication on 23 rd August 2016 following meeting on 4 th August 2016	<p>With regard to soils, the following should be considered as part of the ES:</p> <p>The degree to which soils will be disturbed/ harmed as part of the Proposed Development and whether 'BMV' agricultural land is involved.</p> <p>This may require a detailed survey if one is not already available.</p> <p>Natural England Technical Information Note 049 – Agricultural Land Classification: protecting the best and most versatile agricultural land contains useful background information.</p> <p>If required, an agricultural land classification and soil survey of the land should be undertaken. This should normally be at a detailed level, e.g. one auger boring per hectare (or more detailed for a small site) supported by pits dug in each main soil type to confirm the physical characteristics of the full depth of the soil resource, i.e. 1.2 metres.</p> <p>The ES should provide details of how any adverse impacts on soils can be minimised. See the Defra Construction Code of Practice for the Sustainable Use of Soil on Development Sites.</p>	<p>A detailed ALC soil survey has been undertaken and the findings are presented in this Chapter.</p> <p>The land use and agricultural impact assessment (which includes identification of mitigation measures) is presented within this chapter of the ES.</p>
	Response to Planning Inspectorate regarding EIA Scoping on 30 th August 2016	<p>Rights of Way</p> <p>EIA should consider impacts on access land, public open land, rights of way and coastal access routes in the vicinity of the Proposed Development. Also suggest reference to Rights of Way Improvement Plans is made.</p>	<p>Impacts on Public Rights of Way are considered in this chapter, and also in Chapter 16: Landscape and Visual Amenity.</p>

Consultee	Date (method of consultation)	Summary of consultee comments	Summary of response/ how comments have been addressed
		<p>Soils and Agricultural Land Quality Impacts should be considered in light of the Government's policy for protection of best and most versatile (BMV) agricultural land as set out in paragraph 112 of NPPF.</p> <p>Also suggest soils be considered with reference to sustainable use of land and ecosystems services in line with paragraph 109 of the NPPF.</p> <p>The EIA should consider the degree to which soils will be disturbed/ harmed and whether BMV land is involved.</p> <p>The ES should provide details of how any adverse impacts can be minimised (see Defra Construction Code of Practice for the Sustainable Use of Soil on Development Sites).</p>	<p>As described above, an ALC soil survey has been undertaken and the findings of this are presented within this chapter of the ES.</p>
	<p>10th February 2017 (letter response to formal consultation on PEI Report)</p>	<p>We welcome the proposed soil survey as set out in Section 15.4.6 of the report. Guidance regarding soils is available in Defra <i>Construction Code of Practice for the Sustainable Use of Soils on Construction Sites</i> and background information is also available in Natural England <i>Technical Information Note 049 Agricultural Land Classification: protecting the best and most versatile agricultural land</i>.</p>	<p>Reference to the Defra Construction Code of Practice is made in Section 15.5 (Development Design and Impact Avoidance) and the thresholds for classification of effects is based on the Natural England Technical Advice Note 049 as set out in paragraph 15.3.8.</p>
<p>Coal Authority</p>	<p>Response to Planning Inspectorate regarding EIA Scoping on 13th September 2016</p>	<p>Whilst the Proposed Development would be located within the defined coalfield, it would fall outside of the defined Development High Risk Area, meaning that there are no recorded coal mining legacy hazards at shallow depth that could pose a risk to land stability.</p>	<p>Subsidence is being monitored within the existing coal-fired power station site and is being considered as part of the design. This is discussed in ES Chapter 12: Geology,</p>

Consultee	Date (method of consultation)	Summary of consultee comments	Summary of response/ how comments have been addressed
		<p>The Site is also located outside of any area of surface coal resource so there is no need to consider the potential for prior extraction of coal resources.</p> <p>The Site does fall within the licence area of Kellingley Colliery, which ceased deep underground coal mining activity in December 2015. The Coal Authority is therefore pleased to note that this is identified in Section 6.65 of the EIA Scoping Report (dated August 2016), and that this could potentially result in surface subsidence for several years following cessation of mining activities. This should be considered in the design and the ES for the Proposed Development.</p>	Hydrogeology and Land Contamination.
North Yorkshire County Council	Meeting and subsequent email communications in October-November 2016	Queries regarding employment and skills plan.	The draft DCO will include a Requirement for an employment and skills plan to be prepared in relation to the Proposed Development.
	16 th February 2017 (letter response to formal consultation on PEI Report)	<p>The following PRoWs are affected by the development:</p> <ol style="list-style-type: none"> 1. Public Footpath 35.27/1 2. Public Footpath 35.21/5/1 3. Public Bridleway 35.14/4/1 <p>Where the development is going to affect these PRoWs they will need to be temporarily closed. These closures are done through legal orders which close any PROW for up to 6 months.</p>	Short term temporary PRoW closures (c. three months each) will be required during the construction of the Proposed Cooling Water and Gas Connections. The power to temporarily stop up those PRoW is included within the draft DCO.
	12 th April 2017 (meeting with	Confirmed that temporary diversions would not be required	Noted.

Consultee	Date (method of consultation)	Summary of consultee comments	Summary of response/ how comments have been addressed
	PRoW Officers)	given the short durations of proposed temporary closures of PRoW 35.27/1, 35.21/5/1 and 35.14/4/1.	
	4 th May 2017 (email comments on draft ES chapter)	<p>There perhaps need to be recognition that the immediate impact area (LSOA) is too small to have a meaningful relationship to the scale of the existing power station or proposed development in terms of local economic impact. Later references to York TTWA are far more meaningful / helpful in the context of the proposed application and some reference might also be made to Selby District.</p> <p>The report suggests that the existing construction industry is sufficiently flexible and mobile to ensure that appropriate skills will be available to meet the needs of the development. There should however be some efforts to train and employ local (Selby District) workers to work on the site. I understand that there is a potential requirement for a training and skills plan which might encompass this.</p> <p>The loss of 100 jobs in total during the operational phase is significant locally and efforts should be made to support redundant employees into new jobs leading up to closure of the existing plant. If the gap between old and new facilities is significant then this might apply to the entire workforce of c.200. Although this is not a significant figure (loss of 101 jobs) in some respects, it does represent 16.6% of the employment in mining and quarrying in Selby</p>	<p>Paragraph 15.4.8 has been amended to recognise this.</p> <p>Paragraph 15.6.13 amended to confirm that displacement effects will be considered in the preparation of the employment, training and skills plan, to be prepared in accordance with a draft DCO Requirement.</p> <p>Paragraph 15.6.26 amended to recognise that the impact of the loss of 101 jobs will be higher at the local level, and that the closure of coal-fired power stations across the UK will require workers to shift to new industries, with potentially different</p>

Consultee	Date (method of consultation)	Summary of consultee comments	Summary of response/ how comments have been addressed
		<p>District and would increase the overall rate of claimant unemployment in Selby District by 20%.</p> <p>It is worth noting that the change from coal to gas as well as other forms of low carbon and renewable energy is likely to require a smaller workforce nationally and therefore redundant workers will be required to work in new industries.</p>	skillsets.

Summary of Key Changes to Chapter 15 since Publication of the Preliminary Environmental Information (PEI) Report

- 15.3.30 The PEI Report was published for statutory consultation in January 2017, allowing consultees the opportunity to provide informed comment on the Proposed Development, the assessment process and preliminary findings through a consultation process prior to the finalisation of this ES.
- 15.3.31 The key changes since the PEI Report was published are summarised in Table 15.11 below.

Table 15.11: Summary of key changes to Chapter 15 since publication of the PEI Report

Summary of change since PEI Report	Reason for change	Summary of change to chapter text in the ES
A full agricultural land and soils impact assessment has been completed and is included in the chapter – this was outstanding at PEI stage and is based the results of a soil survey (Appendix 15A).	Update to chapter following receipt of soil survey information which was previously outstanding at PEI stage.	Soils and agricultural land assessment updated in Section 15.6 to reflect survey results.
The Proposed Gas Connection corridor identified in the PEI Report had an approximate width of 100 m. This has now been refined to reduce the width to approximately 36 m.	Following consultation and further technical studies the corridor was refined to reduce the amount of land take required.	Assessment in Section 15.6 amended accordingly.

Summary of change since PEI Report	Reason for change	Summary of change to chapter text in the ES
Proposed Surface Water Discharge Connection at Hensall Dyke included within the Site.	Following update to scheme design and further consultation.	Chapter amended to include consideration of this area.
Consultation has been undertaken on the extent and duration of the temporary closures of PRoWs.	Consultation with NYCC.	Text amended to add detail on temporary closures of PRoWs, with mitigation including appropriate notice and signage to advise PRoW users of the temporary closures.

15.4 Baseline Conditions

Existing Baseline

Land Use

- 15.4.1 The existing land uses within the Site as recorded during the baseline studies in 2016 and 2017 are summarised in Table 15.12 below. The different parts of the Site are marked on Figure 3.2 (ES Volume II).

Table 15.12: Existing land uses within the Site

Part of the Site	Land uses
Proposed Power Plant Site and Proposed Rail and Access Works	Coal stockyard for the existing coal-fired power station and associated rail loop and coal handling facilities, including conveyors, workshop, coal plant garage, gas oil tanks, amenity block, screening and crushing house and lighting towers. Biomass storage building (not in use for biomass). Small area of trees and scrub (to the north-east of the rail loop). Gypsum/ limestone hopper house and associated conveyors (to the north of the rail loop).
Proposed Cooling Water Connections	Internal access roads, storage areas, stores building, and gypsum and limestone conveyors (within the existing coal-fired power station and Proposed Construction Laydown area). Wand Lane and trees to the north of Wand Lane. Existing cooling water pipeline connections. Agricultural land and track between Wand Lane and the River Aire. Ings and Tetherings Drain. Two Public Rights of Way (PRoW) – a footpath linking the A19 to the River Aire immediately east of the existing abstraction point (North Yorkshire County Council reference 35.21/5) and a footpath linking Chapel Haddlesey Weir and a footpath linking to Gallows Hill to the south-east (North Yorkshire County Council

Part of the Site	Land uses
	reference 35.27/1/1). Parts of the River Aire at the abstraction and discharge points.
Proposed Towns Main and Borehole Water Connections	Internal access roads and railway lines. Trees, scrub and grass along Tranmore Lane, alongside the railway line between Tranmore Lane and Weeland Road, and to the east of Eggborough Sports and Leisure Complex (around the existing borehole site). Existing borehole water pipeline connections. Existing power station fire station, office and stores buildings.
Proposed Surface Water Discharge Connection	Trees and scrub. Internal access road and small section of Hazel Old Lane. Existing surface water drainage infrastructure. Hensall Dyke and associated culvert beneath Hazel Old Lane.
Proposed Electricity Connection	Internal access roads, railway lines and gatehouse building. Trees between the railway lines, Tranmore Lane and other internal access roads (in the north-west corner of the rail loop).
Proposed Gas Connection and AGI	Internal access roads, storage areas, stores building, and gypsum and limestone conveyors (within the existing coal-fired power station and Proposed Construction Laydown area). Wand Lane and trees to the north of Wand Lane. Millfield Road, the A19 near Burn Lodge Farm and West Lane. Agricultural land: <ul style="list-style-type: none"> • field and access track between Wand Lane and the River Aire; • fields between River Aire and Millfield Road; • fields and access tracks between Millfield Road and the A19; • fields between the A19 and West Lane; and • field west of West Lane. Ings and Tetherings Drain and field drains along the connection route. Two Public Rights of Way: <ul style="list-style-type: none"> • footpath linking Chapel Haddlesey Weir to Gallows Hill to the south-east (North Yorkshire County Council reference 35.27/1/1); and • bridleway east of the A19 opposite Burn Lodge Farm, which crosses the railway line and loops back to the A19 at Blossom Hill, south of Burn (North Yorkshire County Council reference 35.14/4/1).
Proposed Construction Laydown area including Proposed Carbon Capture Readiness (CCR) Land	Flue gas desulphurisation (FGD) project offices (portakabins, not in use). Gas oil and fuel oil tank. Waste management compound. Workshops and stores buildings. Gypsum and limestone conveyors. Emergency coal stockyard (not in use) Back-up cooling water storage lagoon. Contractors' compound, car park and amenity block.

Part of the Site	Land uses
	<p>Hensall Road gatehouse and induction centre.</p> <p>Internal access roads.</p> <p>Trees, scrub and grass south of the FGD project offices, around the lagoon and along Wand Lane adjacent to the Hensall Gate entrance.</p>

15.4.2 The existing coal-fired power station is anticipated to cease operation during or before the end of 2019, around the time the Proposed Development construction will begin. All existing coal-fired power station buildings and activities within the Site are within the control of Eggborough Power Limited (EPL) (the Applicant) and will therefore cease operation at an appropriate time to allow construction of the Proposed Development to take place.

15.4.3 The only immediately adjacent land uses and receptors identified that have potential to experience direct effects (that are not considered in other technical chapters of this ES) are:

- a short (less than 150 m long) Public Right of Way (PRoW) (footpath) heading east off the A19 along the north side of the Tranmore Lane entrance (North Yorkshire County Council reference 35.27/6/1), which will be used for construction and operational traffic;
- the existing coal-fired power station, which is expected to cease generated by 2019 and subsequently be demolished, and which is located partly within the Site;
- Yorkshire Water waste water treatment works and Air Liquide air separation unit, to the east of Hensall Gate entrance, which is accessed via Wand Lane and could therefore be disrupted by short term construction activities within Wand Lane (i.e. Proposed Cooling Water and Gas Connections crossings); and
- users of local roads crossed by the Proposed Gas Connection (Wand Lane, Millfield Road and West Lane).

Agriculture

15.4.4 As summarised in Table 15.12 above, agricultural land is present within the Proposed Cooling Water Connections and Proposed Gas Connection pipeline and AGI areas of the Site. The Site includes approximately 26.1 ha of agricultural land, primarily within the Proposed Gas Connection corridor. The corridor has a required construction working width of approximately 36 m (wider in places where there are major crossings, for example at the River Aire crossing to allow additional space for directional drilling activities), although the actual pipeline will be less than 1 m in diameter with an associated easement of circa 15 m for maintenance.

15.4.5 The Provisional ALC map published by Natural England (available on the MAGIC website) shows the agricultural land within the Site to comprise a combination of Grade 2 (very good quality agricultural land) and Grade 3 (good/ moderate quality agricultural land).

15.4.6 A detailed soil survey has been undertaken in 2016/17 in accordance with the method set out by Natural England (see Appendix 15A in ES Volume III) to confirm the ALC grade of the agricultural land within the Proposed Cooling Water and Gas Connection parts of the Site. The findings of the survey conclude that around 30% of the agricultural land within the Site is BMV agricultural land (see Appendix 15A in ES Volume III, Figure 15.1 in ES Volume II and Table 15.13 below), and that the soils are a mixture of silty loams (medium sensitivity), sandy clay loams (medium sensitivity), silty clay loams (medium/ high sensitivity), heavy clay loams (high

sensitivity), clays (high sensitivity), loamy sands (low sensitivity), silty clays (high sensitivity) and organic soils (see Appendix 15A in ES Volume III). As such the agricultural land and soils are both a mixture of high, medium and low sensitivity.

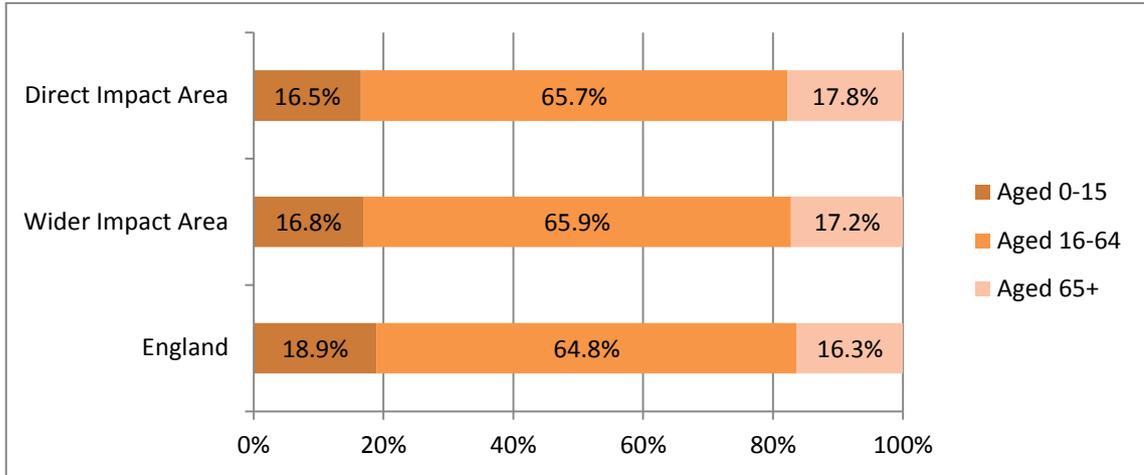
Table 15.13: Summary of ALC Survey Results

ALC Grade	Sensitivity of agricultural land	Area within Site (ha)	% of agricultural land within Site
1 (excellent)	High	0.0	0.0
2 (very good)	Medium	2.1	8.0
3a (good)	Medium	5.6	21.5
3b (moderate)	Low	16.0	61.3
4 (poor)	Low	2.4	9.2
5 (very poor)	Very low	0.0	0.0
Total BMV land (Grade 1, 2 and 3a)		7.7	30
Total agricultural land		26.1	-

Socio-Economics

- 15.4.7 The existing coal-fired power station currently employs approximately 200 permanent staff, plus maintenance contractors, although these jobs are due to be lost when the existing coal-fired power station ceases generation (which is assumed to be in 2019 at the latest).
- 15.4.8 This section outlines the current socio-economic baseline conditions in the Direct Impact Area, Wider Impact Area and England. The local population and labour market are the main receptors in the assessment for employment effects. The baseline conditions help to determine the impact of employment generated by the Proposed Development. The impact is mostly influenced by the size of the labour market and whether it has the relevant skills, occupations and sector strengths to access employment opportunities. The size of the Direct Impact Area suggests that more meaningful impacts, in relation to the scale of the Proposed Development, are at the Wider Impact Area.
- 15.4.9 The 2011 Census data show that the Direct Impact Area had a population of 1,696 while the wider impact area had a population of 330,397 (ONS, 2015). Plate 15.1 shows that both the Direct and Wider Impact Areas had a smaller proportion of young people (aged 0 to 15) than the average across England. Both the Direct Impact Area and Wider Impact Area contain more people of working age (aged 16 to 64) and elderly people (aged 65+) than the English average.

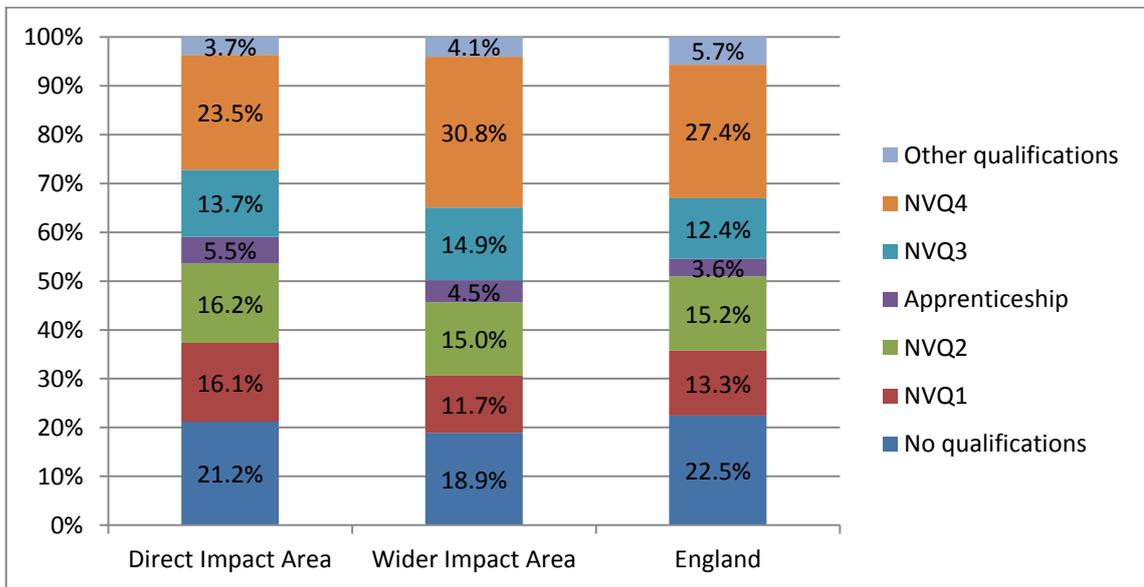
Plate 15.1: Population age structure



Source: ONS Census (2011)

15.4.10 The qualification levels differ markedly across the Direct Impact Area, Wider Impact Area and England (see Plate 15.2). The Direct Impact Area has a higher proportion of the population with qualifications at Apprenticeship level and below. 45.7% of the Wider Impact Area population have NVQ3 or NVQ4 as their highest qualification level, compared with 37.2% in the Direct Impact Area and 39.8% across England. Meanwhile the Direct and Wider Impact Areas had a lower proportion of their population with no qualifications than the average across England.

Plate 15.2: Population qualifications



Source: ONS Census (2011)

15.4.11 Employment in the Direct Impact Area is distributed to sectors quite differently to the Wider Impact Area and England. A higher proportion of people were employed in the production industries such as Agriculture, Mining, Energy, Manufacturing, Construction and Motor Trades than in the Wider Impact Areas and England (ONS 2015). The Direct Impact Area has particular

strengths in Manufacturing and Construction which were responsible for 13.4% and 15.4% of employment, respectively, at the 2011 Census.

- 15.4.12 A higher proportion of people in the Wider Impact Area work in service-based sectors such as ICT, Insurance, Property and Other Business Services and Public Administration, Defence, Education and Health. Table 15.14 shows the proportion of people employed in different sectors in the Direct and Wider Impact Areas and England.

Table 15.14: Employment sectors

	Direct Impact Area	Wider Impact Area	England
Agriculture, mining, energy and water	3.2%	2.1%	1.0%
Manufacturing	13.4%	9.0%	9.6%
Construction	15.4%	9.6%	10.0%
Motor trades, wholesale and retail	3.4%	1.5%	1.3%
Transport & Storage	6.5%	8.5%	8.9%
Accommodation and food services	22.3%	24.9%	25.2%
ICT, insurance, property and other business services	20.9%	22.1%	22.3%
Public administration, defence, education and health	8.5%	12.1%	11.3%
Other	6.4%	10.3%	10.3%

Source: ONS Census (2011)

- 15.4.13 The economic activity rate is higher in the Direct Impact Area, at 74.2%, than across the Wider Impact Area and England (ONS, 2015) (see Table 15.15). 1,102 people in the Direct Impact Area are economically active. There are a higher percentage of full-time and self-employed worker in the Direct Impact Area than in the Wider Impact Area and England. The Direct Impact Area and Wider Impact Area both have lower unemployment rates than in England as whole.
- 15.4.14 The percentage of full-time students in the Direct Impact Area is significantly below that of the Wider Impact Area and England. The Direct Impact area also has a higher percentage of retired people than the Wider Impact Area and England as a whole. This is reflected in the population age structure chart (Plate 15.1).

Table 15.15: Economic activity

Economic activity	Direct Impact Area		Wider Impact Area		England	
	Level	%	Level	%	Level	%
In employment	1,027	69.2	157,531	63.6	24,143,464	62.1
Employee: Part-time	215	14.5	37,132	15.0	5,333,268	13.7
Employee: Full-time	612	41.2	96,317	38.9	15,016,564	38.6
Self-employed	200	13.5	24,082	9.7	3,793,632	9.8
Unemployed	40	2.7	7,570	3.1	1,702,847	4.4
Full-time student	35	2.4	10,974	4.4	1,336,823	3.4
Total	1,102	74.2	176,075	71.0	27,183,134	69.9

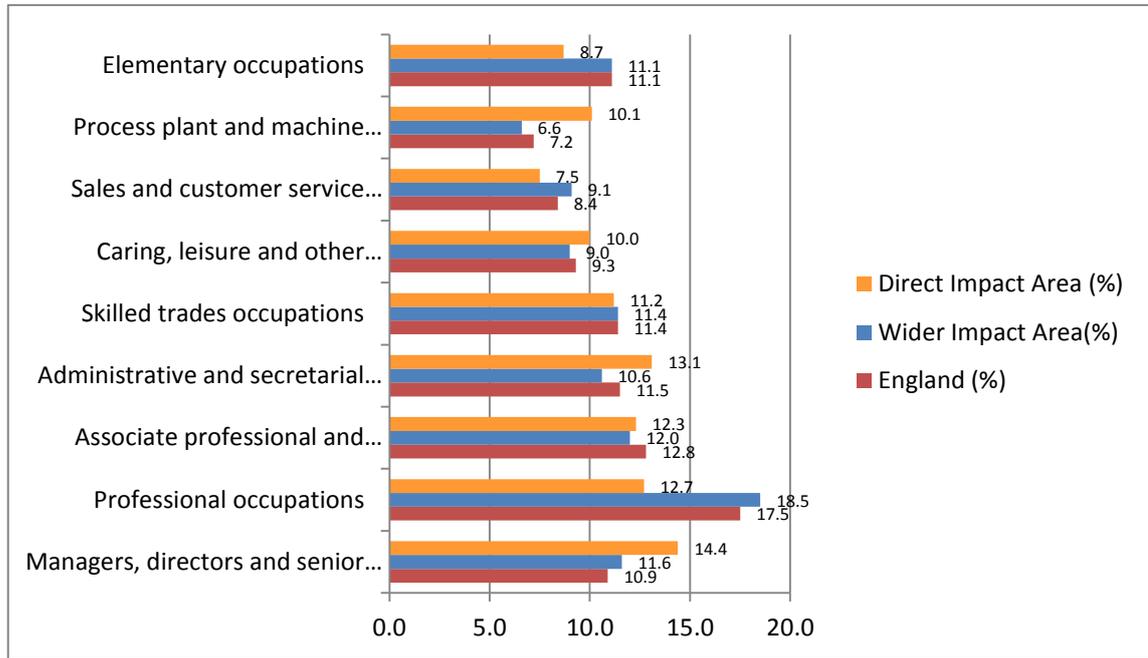
Source: ONS Census (2011)

Economic inactivity	Direct Impact Area		Wider Impact Area		England	
	Level	%	Level	%	Level	%
Retired	244	16.4	36,501	14.7	5,320,691	13.7
Student (including full-time students)	43	2.9	17,789	7.2	2,255,831	5.8
Looking after home or family	50	3.4	7,337	3.0	1,695,134	4.4
Long-term sick or disabled	24	1.6	5,940	2.4	1,574,134	4.0
Other	22	1.5	4,219	1.7	852,450	2.2
Total	383	25.8	71,786	29.0	11,698,240	30.1

Source: ONS Census (2011)

15.4.15 The workforce occupation profile varies across the Direct and Wider Impact Areas and England. In general the Direct Impact Area has a greater proportion of managers, directors and senior officials and a larger amount of process plant and machine operatives (ONS 2015). The Direct Impact Area has a significantly lower percentage of workers employed in professional occupations than seen in the Wider Impact Area and England. There is also a lower proportion of workers employed in elementary occupations in the Direct Impact Area than seen in the Wider Impact Area and England. Plate 15.3 shows the composition of occupations in the workforce for the Direct and Wider Impact Areas and England.

Plate 15.3: Workforce occupations



Source: ONS Census (2011)

Future Baseline

Land Use

- 15.4.16 Land uses within the parts of the Site within the existing coal-fired power station site are anticipated to change with or without the Proposed Development, because the existing coal-fired power station is likely to cease generation during or before 2019. As such it is assumed that all existing coal-fired power station buildings and structures would be removed by 2037. The existing coal-fired power station site may also be redeveloped but no detailed plans have yet been made in this regard, and as such this assessment is outwith the scope of this ES.
- 15.4.17 Land uses within the Site but outside the existing coal-fired power station are not anticipated to change in the future baseline scenario.

Agriculture

- 15.4.18 No change to existing agricultural land uses and quality are anticipated in the future baseline scenario.

Socio-Economics

- 15.4.19 This section outlines the socio-economic future baseline conditions in the Direct Impact Area, Wider Impact Area and England. The future baseline conditions help to identify any changes anticipated in the baseline conditions in the absence of the Proposed Development.
- 15.4.20 While population growth in the Direct Impact Area is expected to be positive overall up to 2037, growth is driven by the 65+ age bracket with the working age population dropping markedly and those aged 0 to 15 seeing a slight fall. The working age population in the Wider

Impact Area is also due to recognise negative annualised growth during the time period, though the 0 to 15 population is set to increase. Once again, the Wider Impact Area is due to see population growth driven by the 65+ cohort. Relevant data is set out in Table 15.16 below.

Table 15.16: Population growth

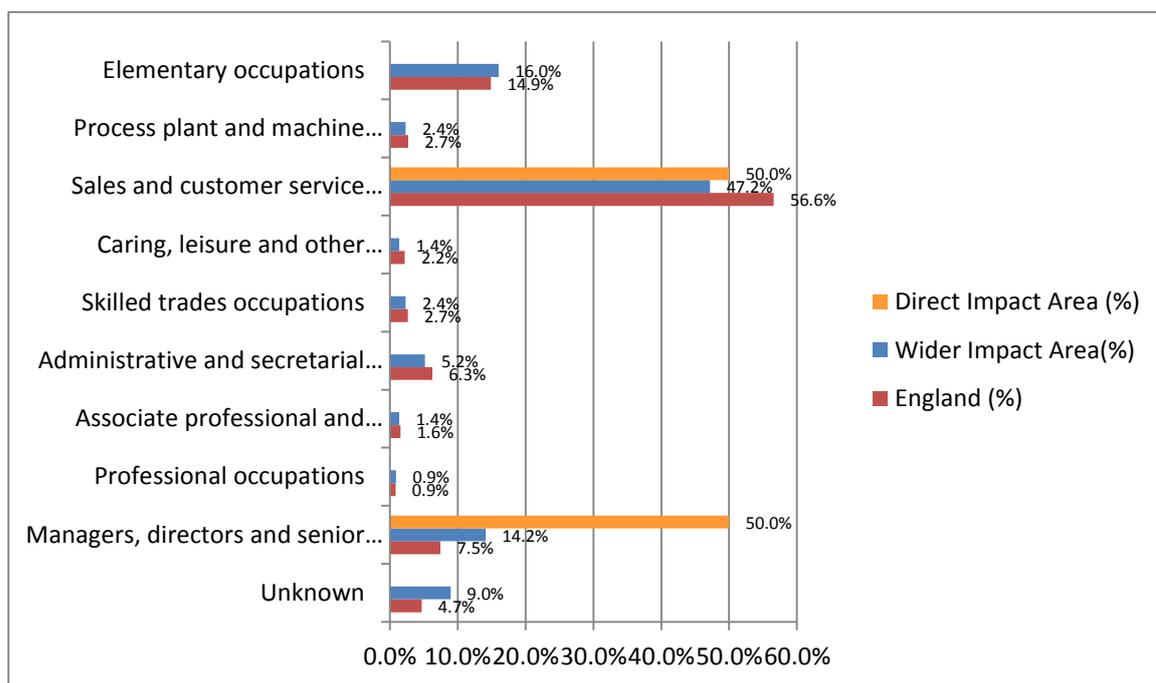
	Direct Impact Area*				Wider Impact Area*				England			
	Total	0 to 15	16 to 64	65+	Total	0 to 15	16 to 64	65+	Total	0 to 15	16 to 64	65+
2011	1,969	325	1,294	350	330,397	55659	217,881	56,857	53,012,456	10,022,836	34,329,091	8,660,529
2016	1,990	327	1,254	394	345,425	58417	218,583	67,307	55,381,043	10,577,510	34,824,363	9,974,203
2019	2,003	328	1,230	424	354,768	60136	219,005	74,477	57,016,919	11,002,158	35,354,512	10,666,686
2022	2,027	331	1,208	460	366,303	62100	220,278	82,756	58,794,386	11,407,290	35,836,383	11,574,381
2037	2,091	321	1,105	611	395,822	62137	215,319	118,484	64,348,234	11,632,698	36,901,258	15,989,610
CAGR (%)	0.24	-0.05	-0.63	2.25	0.73	0.44	-0.05	2.98	0.78	0.60	0.29	2.48

Source: ONS Population Projections (2015)

* As data unavailable for the Direct Impact Area and Wider Impact Area, proxy population growth rates were applied – Direct Impact Area (Selby) and Wider Impact Area (North Yorkshire CC)

- 15.4.21 The most sought after occupations by jobseekers in the Direct Impact Area are in Sales and Customer Service occupations (5 jobseekers in September 2016) and Managers, Directors and Senior Officials (DWP, 2015). However, the percentages are somewhat skewed by the small sample size (10 claimants).
- 15.4.22 For the Wider Impact Area, Sales and Customer Service Roles are the most sought after with 47.2% of jobseekers preferring roles in these sectors. 170 jobseekers (16.0%) were looking for work in Elementary Occupations while 150 (14.2%) were looking for Management/ Senior Official Roles. This data highlights the potential responsiveness of jobseekers in accessing roles made available through the Proposed Development.

Plate 15.4: Sought after occupations



Source: ONS Jobseeker’s Allowance by Occupation (2016)

15.5 Development Design and Impact Avoidance

Land Use and Agriculture

- 15.5.2 The location for the Proposed Development, within the existing coal-fired power station, has been chosen to make use of land that will become redundant when the existing coal-fired power station ceases operation during or before 2019, and thereby reduce impacts on other beneficial land uses. The indicative concept layout within the Proposed Power Plant Site has been developed to avoid impacts on the existing woodland around the perimeter of the existing coal-fired power station, which will be maintained for screening purposes.
- 15.5.3 The Proposed Cooling Water Connections also follow broadly the route of the existing coal-fired power station cooling water connections (except for at the southern end of the route where the Proposed Cooling Water Connections head east towards Hensall Gate to connect to the Proposed Development) thereby minimising impacts on land previously unaffected by the existing coal-fired power station.
- 15.5.4 The requirement for a gas connection to the existing National Grid gas transmission network necessitates the use of land outside the existing coal-fired power station, but the Proposed Gas Connection route that has been identified is the shortest available route, avoiding major technical and environmental constraints and seeking to minimise the number of landowners affected by the Proposed Development, so the extent of land affected outside of EPL ownership has been reduced as much as it can be at this stage.
- 15.5.5 The Proposed Gas Connection corridor identified in the Preliminary Environmental Information (PEI) Report had an approximate width of 100 m (wider in places, for example at the River Aire crossing to allow additional space for directional drilling activities). However, following

consultation on the PEI Report and further technical studies to refine the corridor, the required construction working width has now been reduced to approximately 36 m (wider in places such as at major crossings), and the actual pipeline will be less than 1 m in diameter. The required temporary land take for the construction of the Proposed Gas connection has therefore been reduced as much as possible by design.

- 15.5.6 Soils will be managed, retained, preserved and replaced in accordance with the Defra *Construction Code of Practice for the Sustainable Use of Soil on Development Sites* (Defra, 2009b) to minimise impacts on soil structure and quality, and appropriate measures to minimise short term and long term impacts on land drainage will be discussed and agreed with each landowner. These measures will be included in the Construction Environmental Management Plan (CEMP), a framework for which has been prepared as part of this ES to support the DCO application (Appendix 5A – ES Volume III). A final CEMP will be submitted in accordance with draft DCO Requirement 20.
- 15.5.7 With the exception of the Proposed AGI site, the remainder of the land required for the Proposed Gas Connection will be returned to its current use following the completion of construction.
- 15.5.8 A Landscape and Biodiversity Strategy has also been prepared to support the DCO application (Application Document Ref. No. 5.10), setting out mitigation for the loss of small areas of vegetation within the Site.

Socio-Economics

- 15.5.9 The draft DCO includes a Requirement for the submission to and approval by the local planning authorities of a written plan detailing arrangements to promote employment, training and skills opportunities for local residents during construction and operation of the Proposed Development.

15.6 Likely Impacts and Effects

Construction

Land Use

- 15.6.2 Land uses within the areas of the Site described in Table 15.12 will change as a result of the construction of the Proposed Development, but some of the changes would also occur in the future baseline scenario (assuming demolition of the existing coal-fired power station would start within the same timeframe). Where the changes would/ would not occur in the future baseline scenario, then this is highlighted in Table 15.17.
- 15.6.3 The following structures associated with the existing coal-fired power station may need to be removed to facilitate construction of the Proposed Development (although where appropriate some buildings may be retained for use during the construction phase):
- the majority of the rail loop around the coal stockyard (part of the northern section of railway track is to be retained);
 - coal handling facilities including conveyors to the boiler house, workshop, coal plant garage, gas oil tanks, amenity block, screening and crushing house and lighting towers;
 - biomass storage building (located within the coal stockyard but not in use for biomass);

- gypsum/ limestone hopper house and associated conveyors (to the north of the rail loop);
- flue gas desulphurisation (FGD) project offices (portakabins, not in use);
- gypsum and limestone conveyors associated with the FGB plant;
- gas oil and fuel oil tank;
- waste management compound;
- workshops and stores buildings;
- back-up cooling water storage lagoon; and
- contractors’ compound, car park and amenity block.

15.6.4 The effects are summarised in Table 15.17 below.

Table 15.17: Construction effects on existing land uses within the Site

Part of the Site	Impact	Effect (compared to future baseline)
Proposed Power Plant Site and Proposed Rail and Access Works	The construction of the Proposed Development will require the removal of all existing buildings and structures including the private rail loop (although rail access to the Site will be retained), and a small area of trees and scrub to the north-east of the rail loop. For comparison, in the future baseline scenario (without the Proposed Development), the same changes are also anticipated (with the possible exception of the private rail loop and small area of trees and scrub to the north-east of the rail loop).	Minor adverse effect due to loss of private rail loop (a beneficial but private land use) with rail access to the Site retained (not significant).
Proposed Cooling Water Connections	The construction of the Proposed Development will require the removal of the existing buildings and structures within the existing coal-fired power station site and: <ol style="list-style-type: none"> may require removal of some trees to the north of Wand Lane; cause temporary disruption to users of Wand Lane; cause the short term loss of c. 9.6 ha agricultural land use (during the construction of the Proposed Cooling Water Connections) and temporary disruption to a farm access north of Wand Lane; require the temporary stopping up of two PRoWs (the footpaths linking the A19 to the River Aire immediately east of the existing abstraction point, and Chapel Haddlesey Weir to Gallows Hill to the south-east) for approximately three months; and require works in the River Aire including the installation of temporary cofferdams (but navigation will not be impeded, and signage will be provided for navigational safety). For comparison, in the future baseline scenario (without the Proposed Development), the same	a. Negligible adverse effect due to potential loss of trees north of Wand Lane because the trees are on private land with no public access (not significant). b. Minor adverse effect on Wand Lane due to short term effects on road users (not significant). c. Minor adverse effect on farm access north of Wand Lane due to short term disruption (although access will still be available throughout

Part of the Site	Impact	Effect (compared to future baseline)
	<p>changes are anticipated within the existing coal-fired power station site, but no change is expected to Wand Lane, the trees north of Wand Lane, the use of agricultural land and the use of the PROWs.</p>	<p>construction) (not significant). (Effects on agricultural land assessed separately below.) d. Moderate adverse (temporary) effect on PROWs due to moderate short term stopping up of two PROWs (significant). e. No effect on navigation.</p>
<p>Proposed Towns Main and Borehole Water Connections</p>	<p>The construction of the Proposed Development will require the temporary removal of trees, scrub and grassland, removal of existing buildings and structures, and temporary disruption to the use of internal access roads and railway lines. For comparison, in the future baseline scenario (without the Proposed Development), the existing buildings and structures are anticipated to be removed, but trees, scrub and grassland could be retained and there would be no disruption to the use of internal access roads or railway lines.</p>	<p>Negligible adverse effect due to loss of vegetation within the existing coal-fired power station site where there is no public access (not significant).</p>
<p>Proposed Surface Water Discharge Connection</p>	<p>The construction of the surface water drainage pipeline is anticipated to require the removal of small number of trees/ area of scrub on land owned by EPL, but the majority will be retained as the pipeline will be routed around and only require tree removal around the new discharge structure. The existing internal access road will not be affected but works may be required to the culvert beneath Hazel Old Lane (depending on the findings of a pre-construction survey). For comparison, in the future baseline scenario (without the Proposed Development), the existing conditions would be unchanged.</p>	<p>Negligible adverse effect due to limited loss of vegetation within the existing coal-fired power station site where there is no public access (not significant).</p>
<p>Proposed Electricity Connection</p>	<p>The construction of the Proposed Development will cause temporary disruption to the use of internal access roads and railway lines, and the removal of the gatehouse building and trees between the railway lines, Tranmore Lane and other internal access roads (in the north-west corner of the rail loop). For comparison in the future baseline scenario (without the Proposed Development), the gatehouse may be removed but trees, scrub and grassland could</p>	<p>Negligible adverse effect due to loss of vegetation within the existing coal-fired power station site where there is no public access (not significant).</p>

Part of the Site	Impact	Effect (compared to future baseline)
	<p>be retained and there would be no disruption to the use of internal access roads or railway lines.</p>	
<p>Proposed Gas Connection and AGI</p>	<p>The construction of the Proposed Development will require the removal of the existing buildings and structures within the existing coal-fired power station site and:</p> <ul style="list-style-type: none"> a. may require removal of some trees to the north of Wand Lane; b. cause temporary disruption to users of Wand Lane, Millfield Road and West Lane; c. cause the short term (approximately three months) loss of up to 21.9 ha agricultural land use (during the construction of the Proposed Gas Connection – note some of this is the same as the agricultural land affected by the Proposed Cooling Water Connections) and temporary disruption to farm accesses; and d. require the temporary (approximately three months) stopping up of two PRowS (the footpath linking Chapel Haddlesey Weir to Gallows Hill to the south-east and bridleway east of the A19 opposite Burn Lodge Farm). <p>For comparison in the future baseline scenario (without the Proposed Development), the same changes are anticipated within the existing coal-fired power station site, but no change is expected to Wand Lane, the trees north of Wand Lane, the use of agricultural land, and the use of the PRowS.</p>	<ul style="list-style-type: none"> a. Negligible adverse effect due to potential loss of trees north of Wand Lane because the trees are on private land with no public access (not significant). b. Minor adverse effects on Wand Lane, Millfield Road and West Lane due to short term disruption to road users (not significant). c. Minor adverse effect on farm accesses due to short term disruption (although access will still be available throughout construction) (not significant). (Effects on agricultural land assessed separately below.) d. Moderate adverse (temporary) effect on PRowS due to moderate short term stopping up of two PRowS (significant).
<p>Proposed Construction Laydown area including Proposed</p>	<p>The construction of the Proposed Development will require the removal of all existing buildings and structures, and areas of trees, scrub and grassland. For comparison in the future baseline scenario (without the Proposed Development), the same changes are also anticipated (with the possible</p>	<p>Negligible adverse effect due to loss of low value vegetation within the existing coal-fired power station site where</p>

Part of the Site	Impact	Effect (compared to future baseline)
CCR Land	exception of the grass south of the FGD project offices and trees and scrub along Wand Lane adjacent to the Hensall Gate entrance).	there is no public access (not significant).

15.6.5 Potential direct effects on adjacent land uses that have been identified (that are not considered in other technical chapters of this ES) are:

- **negligible adverse (not significant)** temporary effects on users of the short (less than 150 m long) PRoW (footpath) heading east off the A19 along the north side of the Tranmore Lane entrance ((North Yorkshire County Council reference 35.27/6/1) caused by disruption due to construction;
- **no significant** effects on the existing coal-fired power station, because it is expected to cease generated by 2019 and subsequently be demolished, and there will be distinct, separate boundaries between the existing coal-fired power station demolition and Proposed Development construction sites; and
- **minor adverse (not significant)** temporary disruption to access to the Yorkshire Water waste water treatment works and Air Liquide air separation unit, to the east of Hensall Gate entrance, due to the potential closure of Wand Lane for a period of days or weeks during the construction of the Proposed Cooling Water and Gas Connections (alternative access would be available via Hazel Old Lane); and
- **minor adverse (not significant)** temporary disruption to users of roads crossed by the Proposed Cooling Water and Gas Connections (Wand Lane, Millfield Road and West Lane).

Agricultural Land and Soils

15.6.6 The construction of the Proposed Gas Connection and AGI and the Proposed Cooling Water Connections is anticipated to result in temporary impacts on approximately 7.7 ha of BMV agricultural land. Temporary effects on agricultural land due to construction are summarised as follows:

- temporary impact on approximately 2.1 ha ALC Grade 2 land (a very low impact on a medium sensitivity receptor) is assessed to have a **negligible adverse** effect (**not significant**);
- temporary impact on approximately 5.6 ha ALC Grade 3a land (a low impact on a medium sensitivity receptor) is assessed to have a **minor adverse** effect (**not significant**);
- temporary impact on approximately 16.0 ha ALC Grade 3b land (a low impact on a low sensitivity receptor) is assessed to have a **negligible adverse** effect (**not significant**); and
- temporary impact on approximately 2.4 ha ALC Grade 4 land (a very low impact on a low sensitivity receptor) is assessed to have a **negligible adverse** effect (**not significant**).

15.6.7 With appropriate soil management techniques in place, impacts on soils are anticipated to be short term, with soils reinstated at the end of the construction period. Although the sensitivity of some of the soils resources within agricultural land within the Proposed Cooling Water and Gas Connection parts of the Site is medium or high, the impact at the end of the construction period is anticipated to be low or very low so the effects are generally not considered to be significant.

Employment

- 15.6.8 Construction of the Proposed Development is expected to last approximately three years between early 2019 and early 2022. During this time employment opportunities will be created as a result of the works.
- 15.6.9 Although these jobs are temporary, they represent a positive economic impact that can be estimated as a function of the scale and type of construction. The direct expenditure involved in the construction phase will lead to increased output generated in the York TTWA economy.
- 15.6.10 Based on experience of similar projects, it is anticipated that there would be approximately 1,200 workers required at the peak of construction.

Leakage

- 15.6.11 Leakage effects refer to the proportion of jobs within an Impact Area that are filled by residents living outside the Impact Area (i.e. outside the Wider Impact Area, defined as the York Travel To Work Area). Overall it is assumed that the majority of the employment generated will be taken by people living in the York TTWA. Leakage has been set at 20.4% in line with the proportion of jobs taken by non-residents of the York TTWA. A 20.4% discount is therefore applied to the 1,200 gross jobs created and as such it is estimated that 239 people from outside the York TTWA and 931 people from within will benefit from working at the Proposed Development during the construction period.

Displacement

- 15.6.12 Displacement measures the extent to which the benefits of a project are offset by reductions of output or employment elsewhere. Any additional demand for labour cannot simply be treated as a net benefit - it removes workers from other posts and the net benefit is reduced to the extent that this occurs.
- 15.6.13 Overall it is assumed that due to the flexibility of a typical construction workforce (i.e. they quickly move from project to project) displacement effects are considered to be low. The HCA Additionality Guide suggests 25% as a “ready reckoner” for low levels of displacement. There are expected to be some displacement effects, although only to a limited extent, which will be considered in the preparation of the plan for employment, training and skills in accordance with a draft DCO Requirement (see Section 15.5 above). Applying this level of displacement to total gross direct employment in the York TTWA results in net direct employment of 716.

Multiplier Effect

- 15.6.14 In addition to the direct construction employment generated by the project itself there will be an increase in local employment arising from indirect and induced effects of the construction activity. Employment growth will arise locally through manufacturing services and suppliers to the construction process (indirect or supply linkage multipliers). Additionally, part of the income of the construction workers and suppliers will be spent in the York TTWA, generating further employment (induced or income multipliers).
- 15.6.15 The impact of the multiplier depends on the size of the geographical area that is being considered, the local supply linkages and income leakage from the area. The HCA Additionality Guide provides ‘ready reckoners’ of composite multipliers – the combined effect of indirect

and induced multipliers. It has been assumed that the York TTWA has ‘average’ supply linkages based on the scale of its economy. Therefore a multiplier of 1.3 is determined from the HCA guidance. Applying this multiplier generates an additional 215 indirect and induced jobs in the York TTWA.

Net Construction Employment

- 15.6.16 Based on the gross construction worker requirements in the construction schedule and the additionality factors outlined above 1,170 net construction jobs would be generated, of which 931 are expected to be from the York TTWA. This represents a significant proportion of the existing employment in the direct impact area. Therefore construction employment generated by the Proposed Development would have a significant effect on the local economy.
- 15.6.17 Table 15.18 presents the short-term employment created by the Proposed Development taking leakage, displacement and multiplier effects into account.

Table 15.18: Net construction employment in York TTWA (average no. of workers on site per year)

	York TTWA	Outside of York TTWA	Total
Gross Direct Employment	955	245	1,200
Displacement	239	61	300
Net Direct Employment	716	184	900
Net Indirect/ Induced Employment	215	55	270
Total Net Employment	931	239	1,170

- 15.6.18 The sensitivity of receptors is considered as high. The size of the labour pool of construction workers in the York TTWA is 7,706 (BRES (2015)), and the gross direct employment required during the construction phase would account for around 12.4% of the existing construction workforce in the York TTWA. The magnitude of the impact that the proposed development will therefore make on the construction workforce in the York TTWA is considered high in light of the demands it will place relative to the existing pool of construction labour. This is likely to result in a **major beneficial** short-term and therefore a **significant** effect on the York TTWA’s economy.

Operation

Land Use

- 15.6.19 Effects of land uses will occur at the construction phase of the Proposed Development as described above, but no additional effects are anticipated during the operational phase.

Agricultural Land and Soils

- 15.6.20 Following the completion of construction of the Proposed Cooling Water and Gas Connections, agricultural land will be reinstated to its original condition and returned to its former use. The only area of agriculture land that will be lost permanently is at the AGI location. The ALC grade of this land is Grade 3b – moderate quality (low sensitivity) (see Figure 15.1 in ES Volume II).

This is therefore not considered to be BMV land under the ALC classification, and with the area of land-take being less than 5 ha (very low impact), the effect will be **negligible adverse (not significant)**.

- 15.6.21 The soil type at the Proposed AGI Site comprises clays and heavy clay loams (high sensitivity). It is anticipated that soils removed during the construction of the Proposed AGI will be re-used for landscape planting around the AGI compounds (very low magnitude of impact), so the effect is considered to be **minor adverse (not significant)**.

Gross and Net Operational Employment

- 15.6.22 The Proposed Development will also generate long-term jobs once operational. The following analysis estimates gross operational employment arising from the Proposed Development and then takes into account deadweight (existing employment on site), leakage, displacement and multiplier effects (to assess indirect and induced employment) in order to assess net impacts on the sub-regional and national economies.
- 15.6.23 As described in Section 15.4, the existing coal-fired power station currently employs approximately 200 permanent staff, plus maintenance contractors, although these jobs are due to be lost when the existing coal-fired power station ceases generation (which is assumed to in 2019 at the latest).
- 15.6.24 Based on the assumptions set out in the previous section in relation to displacement and additionality, the deadweight loss of employment experienced by the York TTWA will be around 155 (see Table 15.19).

Table 15.19: Net deadweight employment of existing coal-fired power station

	York TTWA	Outside of York TTWA	Total
Gross Employment of Existing Coal-Fired Power Station Site ('Deadweight')	159	41	200
Displacement	40	10	50
Net direct employment	119	31	150
Indirect & induced employment	36	9	45
Total Net Deadweight Employment of Existing Coal-Fired Power Station Site	155	40	195

- 15.6.25 Assuming leakage of 20.4%, displacement of 25% and a composite multiplier of 1.3 (as per the gross to net calculations for construction employment – see paragraphs 15.6.11-15 below), it is estimated that the Proposed Development would result in the loss of 101 employees when operational in the York TTWA (see Table 15.20).

Table 15.20: Net employment of the Proposed Development in operation

	York TTWA	Outside of York TTWA	Total
Gross Direct Employment	56	14	70
Displacement	14	4	18
Net Direct Employment	42	11	53
Net Indirect / Induced Employment	13	3	16
Net Employment of Existing Coal-Fired Power Station Site ('Deadweight')	155	40	195
Total Net Employment	-101	-26	-127

- 15.6.26 Taking into account the existing overall size of the labour pool in the York TTWA (157,531), a loss of 101 jobs accounts for around 0.06% of those currently in employment. The magnitude of impact is therefore considered to be low during the operational phase, as the size of the labour pool suggests the loss of jobs can be absorbed within the York TTWA's economy. Accordingly the loss of jobs once the Proposed Development is operational is likely to have a **minor adverse (not significant)** long-term effect on the York TTWA's economy. However there is a recognition that the impact will be higher at the local level, with the closure of coal-fired power stations across the UK by 2025 requiring these workers to shift to new industries, potentially requiring different skillsets.

Decommissioning

- 15.6.27 The Proposed Development is expected to operate for at least 25 years. At the end of its operating life, the most likely scenario is that the Proposed Development would be shut down and all above ground structures removed from the Site. There is limited information available at this stage regarding decommissioning methods and timescales.

Land Use

- 15.6.28 It is not possible to predict the future use of the Site following the decommissioning and demolition of the Proposed Development (apart from the agricultural parts of the Site within the Proposed Cooling Water and Gas Connection corridors, which are anticipated to be ongoing throughout the operation of the Proposed Development). The land could be redeveloped for other beneficial uses but overall the effect is considered to be **neutral (not significant)**.

Agriculture

- 15.6.29 It is assumed that the pipework for the Proposed Cooling Water and Gas Connections would be left in situ, so effects on agricultural land as a result of decommissioning and demolition would be limited to the Proposed AGI location. This land could potentially be returned to agricultural use, with the use of suitable measures to improve the soil quality of this area of land, but overall the effect is considered to be **neutral (not significant)**.

Employment

- 15.6.30 The people employed to decommission the Proposed Development would have an effect on the economy by spending their wages in the same way that those employed in the other stages will. Overall the decommissioning phase of the Proposed Development will have a **minor beneficial (not significant)** effect on employment in the local area.

15.7 Mitigation and Enhancement Measures

Land Use

- 15.7.2 The temporary impacts on users of the three PRoWs affected during the construction of the Proposed Cooling Water and Gas Connections have been discussed and, due to the short duration of the temporary PRoW closures, it has been agreed with North Yorkshire County Council that no diversions are required. Appropriate notice and signage will be installed to advise PRoW users of the temporary closures, to minimise disruption, and the PRoWs will be reinstated to their original condition following completion of the works.
- 15.7.3 The loss of trees and other vegetation from within the existing coal-fired power station site will be mitigated by the implementation of the principles of the Indicative Landscape and Biodiversity Strategy (Application Document Ref. No. 5.10) in accordance with draft DCO Requirement 6.

Agriculture

- 15.7.4 As described in Section 15.5, agricultural soils will be managed, preserved, retained and reinstated in accordance with Defra guidance (Defra, 2009b) to minimise impacts on soil structure and quality and appropriate measures to minimise short term and long term impacts on land drainage will be discussed and agreed with each landowner. No additional mitigation for agriculture has been identified as necessary at this stage.

Socio-Economics

- 15.7.5 Due to the significant effect on the local labour market during construction, there is a need to ensure local residents are able to secure the employment opportunities available. As described in Section 15.5, a Requirement is included in the draft DCO requiring the submission to and approval by the authorities of an Employment and Skills Plan to promote opportunities for local residents. This Plan will also cover operational employment and skills.
- 15.7.6 No other additional mitigation measures, over and above that stated in the other technical chapters of this ES, are required to avoid or minimise the socio-economic effects identified in this chapter.

15.8 Limitations or Difficulties

- 15.8.1 No significant limitations or difficulties have been identified during the preparation of this chapter.

15.9 Residual Effects and Conclusions

- 15.9.1 The significant effects associated with the Proposed Development before and after mitigation are summarised in Table 15.21.

Table 15.21: Summary of significant effects

Development stage	Environmental effect (following development design and impact avoidance measures)	Classification of effect prior to mitigation	Mitigation/ enhancement (if identified)	Classification of residual effect after mitigation	Nature of effect(s) (Lt/ Mt/ St and P/ T and D/ In)
Construction	Disruption to users of three PRowS during construction of Proposed Cooling Water and Gas Connections	Moderate adverse (significant)	Appropriate notice and signage will be installed to advise PRow users of the temporary closures, to minimise disruption, and the PRowS will be reinstated to their original condition following completion of the works	Moderate adverse (significant)	St, T, D
Construction	Net employment generated during construction	Major beneficial (significant)	None required but an Employment and Skills Plan will be prepared to ensure local residents have opportunities to secure employment opportunities.	Major beneficial (significant)	St, P, D

Note: Lt = long term, Mt = medium term, St = short term, P = permanent, T = temporary, D = direct and In = indirect.

15.10 References

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- Department for Communities and Local Government (DCLG) (2012a) *National Planning Policy Framework*. DCLG, London.
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- Department for Environment, Food and Rural Affairs (2009a) *Safeguarding our Soils – A Strategy for England*
- Department for Environment, Food and Rural Affairs (2009b) *Construction Code of Practice for the Sustainable Use of Soils on Construction Sites*
- HM Treasury (2011) *The Green Book – Appraisal and Evaluation in Central Government*
- HM Treasury (2011) *The Magenta Book – Guidance for evaluation*
- Homes & Communities Agency (HCA) (2014) *Additionality Guide (4th Edition)*
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