

## 17.0 STATEMENT OF SIGNIFICANCE

### Residual Effects

- 17.1 The residual effects of the Proposed Development following implementation of the measures outlined in the preceding technical chapters and in Chapter 16 have been assessed. Although each technical chapter contains detailed consideration of residual effects, **Table 17.1** summarises the main residual effects of the Proposed Development. The significance criteria are set out in Chapter 2 (EIA Methodology) and within relevant technical chapters where a different approach is followed.
- 17.2 The preparation of the ES was undertaken in parallel with the design process. Consequently, many measures to mitigate likely significant adverse environmental effects have been incorporated into the Proposed Development design in order to avoid, reduce or offset such effects. With respect to management of the demolition and construction process, the Construction Environmental Management Plan (CEMP) will set out the methods of managing environmental issues for all involved with the construction works to eliminate, reduce or offset adverse environmental effects. These will address relevant environmental issues, such as: noise; air quality and dust; hours of work; site drainage and protection from or minimisation of surface/ground-water pollution and protection of environmental and amenity resources. It is anticipated that the mitigation measures identified will be secured by planning obligations or conditions, to ensure that the scheme proposed by the Applicant is delivered.
- 17.3 In summary, the Proposed Development comprises the exploitation of conventional hydrocarbon resources only, for an operational period of up to five years, including: gas production from one wellhead at the existing Ebberston Moor 'A' Well Site; piping the produced gas to the adjoining Lockton Compound where the gas would be conditioned; injecting the conditioned gas via an existing Above Ground Installation (AGI) connection to a Northern Gas Network (NGN) pipeline that runs between Pickering and Whitby; and creation of two new access points off Ebberston Common Lane.
- 17.4 The Proposed Development will result in the following beneficial effects:
- Supplying a significant area of North Yorkshire with locally produced natural gas;
  - The creation of up to 30 construction and 10 demolition and restoration jobs, for people with skills that are readily available in the local labour market;
  - Introduction of indirect economic vitality to the local area through local procurement of supplies and services during construction;

- Securing the present employment of the Applicant's employees who will be in charge of operating the facility;
- Providing additional and new business to local businesses engaged in transport, engineering, maintenance and supply; and
- Improvement of the UK's ability to manage fluctuations (daily, weekly and seasonally) which occur in gas supply and demand and thus enabling indirect reductions in costs for householders and commercial and industrial companies,

17.5 The ES has also identified a number of adverse effects which will mainly occur during construction and demolition and restoration phases which include the following:

- Loss of breeding bird habitat;
- Changes to a limited number of views associated with construction activities from residential properties, roads and public rights of way;
- Local changes to landscape features, character and the National Park as a result of construction activities;
- Temporary disruption to users of the surrounding road network;
- Potential for mobilisation of contaminants resulting in the deterioration of surface and ground water quality;
- Potential for dust emissions resulting from the clearance of on-site structures and groundworks; and
- Potential for noise and vibration disturbance to the nearby residents.

17.6 However, the implementation of the mitigation measures outlined within the CEMP during construction such as the use of site hoarding, dust and noise suppression measures and temporary drainage will result in many adverse effects being minimised or avoided.

17.7 There would also be adverse residual effects during operation of the Proposed Development resulting from the following:

- Changes to a limited number of views from residential properties, roads and public rights of way;
- Local changes to the National Park;
- Increased traffic along Ebberston Lane and Ebberston Common Lane associated with operational staff access and existing the Proposed Development and the transportation of by products and treatment fluids;
- Visual and landscape effects on Ebberston Low Moor Round Barrow Scheduled Monument and its setting;

- Increased traffic movement affecting the setting of Ebberston Low Moor Round Barrow Scheduled Monument.

17.8 Once decommissioning and restoration has been completed after up to five years of operational activities in scenario 1 (future planning permission is secured for the well site) many of the effects on the environment will generally be neutral or slightly beneficial. There will be more beneficial effects in scenario 2 (no future planning permission is secured for the well site) as the whole Assessment Site will be decommissioned and restored to its original state of forestry.

Table 17.1: Significance Table

Topic	Stage of Development	Residual Effects	Duration of Effect	Geographical Importance							Significance of Residual Effect	
				I	UK	E	R	C	N P	L		
Ecology	Construction	Displacement/ disturbance to birds in the North York Moors SPA/ SSSI	Temporary	*								Negligible
		Loss of habitat including forestry plantation	Permanent							*		Negligible
		Damage to habitat as a result of dust deposition	Temporary							*		Negligible
		Loss of breeding bird habitat	Permanent							*		Minor Adverse
		Noise/visual disturbance to breeding goshawk	Temporary							*		Negligible
		Noise/visual disturbance to breeding nightjar	Temporary							*		Negligible
		Loss of habitat used by foraging/ commuting bats	Permanent							*		Negligible
		Lighting disturbance to foraging/ commuting bats	Temporary							*		Negligible
		Loss of habitat supporting reptiles	Permanent							*		Negligible
		Loss/ damage to habitat supporting reptiles	Temporary							*		Negligible
	Operation	Changes in air quality resulting in effects on Troutsdale & Rosekirk Dale Fens SSSI	Temporary		*							Negligible
		Changes in water quality resulting in effects on Troutsdale & Rosekirk Dale Fens SSSI	Temporary		*							Negligible
		Noise/visual disturbance to birds in the North York Moors SPA/ SSSI	Temporary		*							Negligible
		Changes in air quality resulting in effects on habitats	Temporary							*		Negligible
		Changes in water quality resulting in effects on habitats	Temporary							*		Negligible
		Noise/visual disturbance to breeding	Temporary							*		Negligible

Topic	Stage of Development	Residual Effects	Duration of Effect	Geographical Importance							Significance of Residual Effect	
				I	UK	E	R	C	N P	L		
		goshawk										
		Noise/visual disturbance to breeding nightjar	Temporary							*	Negligible	
		Lighting disturbance to foraging/ commuting bats	Temporary							*	Negligible	
	Decommissioning and Restoration	Changes in air quality resulting in effects on Troutsdale & Rosekirk Dale Fens SSSI	Temporary		*							Negligible
		Noise/ visual disturbance to birds in the North York Moors SPA/ SSSI	Temporary	*								Negligible
		Noise/ visual disturbance to breeding goshawk	Temporary							*	Negligible	
		Noise/ visual disturbance to breeding nightjar	Temporary							*	Negligible	
		Increased habitat availability for foraging/ commuting bats	Temporary							*	Minor Beneficial	
	Landscape and Views	Construction	Landscape Features	Temporary							*	Moderate Adverse
			Landscape Character	Temporary				*	*	*		Moderate Adverse
National Park			Temporary				*	*	*	*	Moderate Adverse	
Visual Effects – Residential Properties			Temporary							*	Minor Adverse	
Visual Effects – Roads			Temporary							*	Moderate Adverse	
Visual Effects - PRoW			Temporary						*	*	Moderate Adverse	
Visual Effects – Night Sky Character			Temporary								Moderate Adverse	
Operation		Landscape Features	Temporary (up to 5 years)							*	Minor Adverse	
		Landscape Character	Temporary (up to 5 years)					*	*	*	Minor Adverse	
		National Park	Temporary (up to 5 years)				*	*	*	*	Minor Adverse	

Topic	Stage of Development	Residual Effects	Duration of Effect	Geographical Importance							Significance of Residual Effect	
				I	UK	E	R	C	N P	L		
		Visual Effects – Residential Properties	Temporary (up to 5 years)								*	Minor Adverse
		Visual Effects - Roads	Temporary (up to 5 years)								*	Moderate Adverse
		Visual Effects – ProW	Temporary (up to 5 years)						*	*		Moderate Adverse
		Visual Effects – Night Sky Character	Temporary (up to 5 years)						*	*		Moderate Adverse
	Decommissioning and Restoration (Scenario 1)	Landscape Features	Permanent								*	Negligible
		Landscape Character	Permanent					*	*	*		Negligible
		National Park	Permanent				*	*	*	*		Negligible
		Visual Effects – Residential Properties	Permanent								*	Negligible
		Visual Effects – Roads	Permanent								*	Negligible
		Visual Effects - PROW	Permanent						*	*		Minor Adverse – Negligible
		Visual Effects – Night Sky Character	Permanent						*	*		Negligible
	Decommissioning and Restoration (Scenario 2)	Landscape Features	Permanent									Minor Beneficial
		Landscape Character	Permanent									Minor Beneficial
		National Park	Permanent									Minor Beneficial
		Visual Effects – Residential Properties	Permanent									Minor Beneficial
		Visual Effects – Roads	Permanent									Minor Beneficial
		Visual Effects - PROW	Permanent									Minor Beneficial
		Visual Effects – Night Sky Character	Permanent									Negligible
	Air Quality	Construction	Increase in fugitive dust emissions during construction	Temporary								*
Construction traffic emissions			Temporary								*	Negligible
Operation		Operational traffic emissions	Temporary								*	Negligible
		Operational plant emissions	Temporary								*	Negligible

Topic	Stage of Development	Residual Effects	Duration of Effect	Geographical Importance							Significance of Residual Effect
				I	UK	E	R	C	N P	L	
	Decommissioning and Restoration	Increase in fugitive dust emissions during decommissioning and restoration	Temporary							*	Negligible
		Decommissioning and restoration traffic emissions	Temporary							*	Negligible
Noise and Vibration	Construction	Noise nuisance at local noise-sensitive properties	Temporary							*	None
		Increased road traffic noise at local noise-sensitive properties	Temporary							*	None
	Operation	Noise nuisance and loss of amenity at local noise-sensitive properties	Temporary							*	Negligible
		Increased road traffic noise at local noise-sensitive properties	Temporary							*	Negligible
		Increased noise for passers-by	Temporary							*	Negligible
	Decommissioning and Restoration	Noise nuisance at local noise-sensitive properties	Temporary							*	None
Transport and Access	Construction	Construction activities	Temporary							*	Minor Adverse / Negligible
	Operation	Operational staff	Temporary							*	Minor Adverse / Negligible
		Transportation of by-products and treatment fluids	Temporary							*	Minor Adverse / Negligible
	Decommissioning and Restoration	Traffic along Eberston Lane and Eberston Common Lane	Temporary							*	Minor Adverse / Negligible
Flood Risk, Hydrology and Drainage	Construction	Contamination of Aquifer	Permanent						*	*	Negligible
		Contamination of Aquifer during construction	Permanent						*	*	Negligible
		Construction activities	Temporary							*	Negligible
	Operation	Discharge of surface water from sites	Permanent						*	*	Minor Adverse / Negligible
		Delivery/ collection of fluids by tanker	Permanent						*	*	Minor Adverse / Negligible
	Decommissioning and Restoration	Contaminated discharge	Permanent						*	*	Negligible
		Reinstatement of original environment	Permanent						*	*	Moderate

Topic	Stage of Development	Residual Effects	Duration of Effect	Geographical Importance							Significance of Residual Effect
				I	UK	E	R	C	N P	L	
											Beneficial
Archaeology and Cultural Heritage	Construction	Damage / destruction buried archaeological remains or deposits within Assessment Site	Permanent						*		Moderate Beneficial
		Visual and landscape effects on Scheduled Monument: Eberston Low Moor Round Barrow (Map code 9)	Temporary		*						Minor Adverse
		Increased traffic movement affecting setting of Scheduled Monument: Eberston Low Moor Round Barrow (Map code 9)	Temporary		*						Minor Adverse
		Landscape effect on setting of Scheduled Monument: Eberston Low Moor earthworks (Map code 8)	Temporary		*						Negligible Adverse
		Damage post-medieval quarry site (Map code 18)	Permanent							*	Negligible Adverse
	Operation	Visual and landscape effects on Scheduled Monument: Eberston Low Moor Round Barrow (Map code 9)	Temporary		*						Minor Adverse
		Increased traffic movement affecting setting of Scheduled Monument: Eberston Low Moor Round Barrow (Map code 9)	Temporary		*						Minor Adverse
		Landscape effects on setting of Scheduled Monument: Eberston Low Moor earthworks (Map code 8)	Temporary		*						Negligible Adverse
	Decommissioning and Restoration	Visual and landscape effects on Scheduled Monument: Eberston Low Moor Round Barrow (Map code 9)	Temporary		*						Moderate Beneficial
		Increased traffic movement of Scheduled Monument: Eberston Low Moor Round Barrow (Map code 9)	Temporary		*						Moderate Beneficial
		Landscape effects on setting of Scheduled Monument: Eberston Low Moor earthworks (Map code 8)	Temporary		*						Moderate Beneficial
	Socio Economics	Construction	Effects on	Short Term					*	*	*



Topic	Stage of Development	Residual Effects	Duration of Effect	Geographical Importance							Significance of Residual Effect
				I	UK	E	R	C	NP	L	
		Employment									
	Operation	Effects on Employment	Medium Term					*	*	*	Minor Beneficial
		Effects on Gas Supply	Medium Term		*						Moderate Beneficial
	Demolition and Restoration	Effects on Employment	Short Term					*	*	*	Minor Beneficial
Ground Conditions and Contamination	Construction	Hydrocarbon contamination	Temporary							*	Negligible
		Ground collapse during construction	Temporary							*	Negligible
	Operation	Hydrocarbon contamination	Temporary							*	Negligible
		Process waste contamination	Temporary							*	Negligible
	Decommissioning and Restoration	Hydrocarbon contamination	Temporary							*	Negligible
		Process waste contamination	Temporary							*	Negligible

**\* Geographical Level of Importance**

I = International; UK = United Kingdom; E = England; R = Regional; C = County; NP = National Park; L = Local