

## 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 the production of energy, including: gas production from the existing Eberston Moor 'A' Well Site; and construction of a 15.3 km long 8" steel diameter underground pipeline from Eberston Moor 'A' Well Site to Knapton Generating Station (KGS) for the purpose of delivering natural gas and condensate from Eberston Moor 'A' Well Site to KGS where it will be used as fuel-gas to generate power.
- 17.4 The Proposed Development will result in the following beneficial effects:
- The recording of previously unknown cultural heritage remains where found during construction of the Proposed Development;
  - Supplying a significant area of North Yorkshire with locally produced energy;
  - The creation of up to 50 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 will 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;
- Visual and landscape effects on Eberston Low Moor Round Barrow and Givendale Head Pit alignment Scheduled Monuments and their setting; and
- Increased traffic movement affecting the setting of Eberston Low Moor Round Barrow Scheduled Monument.

17.8 Once decommissioning and restoration has been completed after up to 15 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 well site will be decommissioned and restored to its original state of forestry. The pipeline between Ebberston Moor 'A' Well Site and KGS will be left in situ with the ends capped to avoid further disturbance of the ground. There will also be no decommissioning or restoration at KGS.

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	D / N P	L		
Ecology	Construction	Displacement/ disturbance to birds in the North York Moors SPA/ SSSI	Short term temporary	*								Negligible
		Changes in water quality resulting in effects on Troutsdale & Rosekirk Dale Fens SSSI	Short term temporary		*							Negligible
		Loss of habitat including forestry plantation	Short term temporary							*		Negligible
		Damage to habitat as a result of dust deposition	Short term temporary							*		Negligible
		Loss of breeding bird habitat	Short term temporary							*		Minor Adverse
		Noise/ visual disturbance to breeding goshawk	Short term temporary							*		Negligible
		Noise/ visual disturbance to breeding nightjar	Short term temporary							*		Negligible
		Loss of habitat used by foraging/ commuting bats	Short term temporary							*		Negligible
		Lighting disturbance to foraging/ commuting bats at Eberston Moor 'A' Well Site	Short term temporary							*		Negligible
		Loss/ damage to habitat supporting reptiles	Short term temporary							*		Negligible
		Loss/ damage to habitat supporting water voles	Short term temporary					*				Negligible
		Loss of habitat supporting brown hare	Short term temporary							*		Negligible
	Operation	Changes in water quality resulting in effects on Troutsdale & Rosekirk Dale Fens SSSI	Long term temporary		*							Negligible

Topic	Stage of Development	Residual Effects	Duration of Effect	Geographical Importance							Significance of Residual Effect	
				I	UK	E	R	C	D / N P	L		
		Noise/ visual disturbance to birds in the North York Moors SPA/ SSSI	Long term temporary	*								Negligible
		Changes in air quality resulting in effects on habitats	Long term temporary							*		Negligible
		Changes in water quality resulting in effects on habitats	Long term temporary							*		Negligible
		Noise/ visual disturbance to breeding goshawk	Long term temporary							*		Negligible
		Noise/ visual disturbance to breeding nightjar	Long term temporary							*		Negligible
		Lighting disturbance to foraging/ commuting bats at Ebberston Moor 'A' Well Site	Long term temporary							*		Negligible
	Decommissioning and Restoration	Changes in air quality resulting in effects on Troutsdale & Rosekirk Dale Fens SSSI	Short term temporary		*							Negligible
		Noise/ visual disturbance to birds in the North York Moors SPA/ SSSI	Short term temporary	*								Negligible
		Noise/ visual disturbance to breeding goshawk	Short term temporary							*		Negligible
		Noise/ visual disturbance to breeding nightjar	Short term temporary							*		Negligible
		Increased habitat availability for foraging/ commuting bats	Short term temporary							*		Minor Beneficial
Landscape and Views	Construction with no Ebberston Moor EDS in place prior to construction	Landscape Features	Short term temporary							*		Moderate Adverse
		Landscape Character	Short term temporary					*	*	*		Moderate Adverse
		National Park	Short term temporary				*	*	*	*		Moderate Adverse
		Visual Effects – Residential Properties	Short term							*		Minor Adverse

Topic	Stage of Development	Residual Effects	Duration of Effect	Geographical Importance							Significance of Residual Effect
				I	UK	E	R	C	D / N P	L	
			temporary								
		Visual Effects - Roads	Short term temporary							*	Moderate Adverse
		Visual Effects - PROW	Short term temporary						*	*	Moderate Adverse
	Construction with Ebberston Moor EDS in place prior to construction	Landscape Features	Short term temporary							*	Minor Adverse
		Landscape Character	Short term temporary					*	*	*	Minor Adverse
		National Park	Short term temporary				*	*	*	*	Moderate Adverse
		Visual Effects – Residential Properties	Short term temporary							*	Negligible to Minor Adverse
		Visual Effects - Roads	Short term temporary							*	Minor Adverse
		Visual Effects - PROW	Short term temporary						*	*	Moderate Adverse
	Construction of pipeline	Landscape Features	Short term temporary							*	Moderate Adverse
		Landscape Character	Short term temporary					*	*	*	Moderate Adverse
		National Park	Short term temporary				*	*	*	*	Moderate Adverse
		Visual Effects – Residential Properties	Short term temporary							*	Negligible to Major Adverse
		Visual Effects - Roads	Short term temporary							*	Negligible to Major Adverse
		Visual Effects - PROW	Short term temporary						*	*	Negligible to Major Adverse
	Operation	Landscape Features	Long term temporary							*	Minor Adverse

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

Topic	Stage of Development	Residual Effects	Duration of Effect	Geographical Importance						Significance of Residual Effect	
				I	UK	E	R	C	D / N P		L
			temporary								
	Decommissioning and Restoration	Increase in fugitive dust emissions during decommissioning and restoration	Short term temporary							*	Negligible
		Decommissioning and restoration traffic emissions	Short term temporary							*	Negligible
Noise and Vibration	Construction	Noise nuisance at local noise-sensitive properties local to Eberston Moor 'A' Well Site	Short term temporary							*	None
		Noise nuisance at noise-sensitive properties within 500m of pipeline route.	Short term temporary							*	None
		Increased road traffic noise at local noise-sensitive properties	Short term temporary							*	None
	Operation	Noise nuisance and loss of amenity at local noise-sensitive properties local to Eberston Moor 'A' Well Site	Long term temporary							*	Negligible
		Increased road traffic noise at local noise-sensitive properties	Short term temporary							*	Negligible
		Increased noise for passers-by	Short term temporary							*	Negligible
		Noise nuisance and loss of amenity at noise-sensitive properties within 500m of pipeline route.	Long term temporary							*	None
Decommissioning and Restoration	Noise nuisance at local noise-sensitive properties	Short term temporary							*	None	
Transport and Access	Construction	Construction activities	Short term temporary							*	Minor Adverse / Negligible
	Operation	Operational staff	Long term temporary								Negligible
	Decommissioning and	Traffic along Eberston Lane and Eberston Common Lane	Short term temporary								Minor Adverse / Negligible



Topic	Stage of Development	Residual Effects	Duration of Effect	Geographical Importance							Significance of Residual Effect
				I	UK	E	R	C	D / N P	L	
	Restoration	Traffic on minor roads south of A170	None								None
Flood Risk, Hydrology and Drainage	Construction	Contamination of Aquifer during construction	Permanent/long term						*	*	Negligible
		Construction activities	Short term temporary							*	Negligible
	Operation	Discharge of surface water from sites	Long term temporary						*	*	Minor Adverse / Negligible
	Decommissioning and Restoration	Contaminated discharge	Permanent /long term						*	*	Negligible
		Reinstatement of original environment	Permanent						*	*	Moderate Beneficial
Archaeology and Cultural Heritage	Construction	Damage / destruction buried archaeological remains or deposits within Assessment Site: site of post-medieval farm and adjacent earthworks; continuation of prehistoric Allerston West Dyke; alignment of prehistoric ditch near Warren House; and Roman pottery cluster north of A170 road.	Permanent						*		Moderate Beneficial
		Damage / destruction of buried archaeological remains or deposits within Assessment Site: vicinity of Scheduled Monument prehistoric pit alignment near northern end of route and vicinity of Scheduled Monument prehistoric barrow near Warren House	Permanent		*						Moderate Beneficial
		Damage / destruction of buried archaeological remains or deposits within Assessment Site: concentration of Roman pottery south of River Derwent and Iron Age-Roman and medieval ditches near KGS.	Permanent						*		Moderate Beneficial
		Damage / destruction of buried	Permanent		*						Moderate

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				I	UK	E	R	C	D / N P	L	
		archaeological remains or deposits on Givendale Head pit alignment Scheduled Monument.									Beneficial
		Visual and landscape effects on Scheduled Monument: Givendale Head pit alignment	Short term temporary		*						Minor Adverse
		Visual and landscape effects on Scheduled Monument: Ebberston Low Moor Round Barrow	Short term temporary		*						Minor Adverse
		Visual and landscape effects on Scheduled Monument: Warren House Round Barrow	Short term temporary		*						Minor Beneficial
		Landscape effect on setting of Scheduled Monument: Ebberston Low Moor earthworks	Short Term temporary		*						Negligible Adverse
	Operation	Visual and landscape effects on Scheduled Monument: Warren House Round Barrow	Long term temporary		*						Minor Beneficial
		Visual and landscape effects on Scheduled Monument: Givendale Head pit alignment	Long term temporary		*						Minor Adverse
		Visual and landscape effects on Scheduled Monument: Warren House Round Barrow	Long term temporary		*						Minor Beneficial
		Visual and landscape effects on Scheduled Monument: Givendale Head pit alignment	Long term temporary		*						Minor Adverse
		Visual and landscape effects on Scheduled Monument: Ebberston Low Moor Round Barrow	Long term temporary		*						Minor Adverse
		Increased traffic movement affecting setting of Scheduled Monument: Ebberston Low Moor Round Barrow	Long term temporary		*						Minor Adverse
		Increased traffic movement affecting	Long term		*						Minor Adverse

Topic	Stage of Development	Residual Effects	Duration of Effect	Geographical Importance							Significance of Residual Effect
				I	UK	E	R	C	D / N P	L	
		setting of Scheduled Monument: Ebberston Low Moor Round Barrow	temporary								
		Increased traffic movement affecting setting of Scheduled Monument: Ebberston Low Moor Round Barrow	Long term temporary		*						Minor Adverse
		Landscape effects on setting of Scheduled Monument: Ebberston Low Moor earthworks	Long term temporary		*						Negligible Adverse
	Decommissioning and Restoration	Visual and landscape effects on Scheduled Monument: Ebberston Low Moor Round Barrow	Short term temporary		*						Moderate Beneficial
		Increased traffic movement of Scheduled Monument: Ebberston Low Moor Round Barrow	Short term temporary		*						Moderate Beneficial
		Landscape effects on setting of Scheduled Monument: Ebberston Low Moor earthworks	Short term temporary		*						Moderate Beneficial
Socio Economics	Construction	Effects on Employment	Short term temporary					*	*	*	Minor Beneficial
	Operation	Effects on Employment	Long term temporary					*	*	*	Minor Beneficial
		Effects on Gas Supply	Long term temporary		*						Major Beneficial
	Demolition and Restoration	Effects on Employment	Short term temporary					*	*	*	Minor Beneficial
Ground Conditions and Contamination	Construction	Hydrocarbon contamination	Short term temporary							*	Negligible
		Ground collapse during construction	Short term temporary							*	Negligible
		Landslides	Short term temporary							*	Minor Adverse
		Collapse of pipeline trench due to running sands	Short term temporary							*	Negligible

Topic	Stage of Development	Residual Effects	Duration of Effect	Geographical Importance							Significance of Residual Effect
				I	UK	E	R	C	D / NP	L	
	Operation	Hydrocarbon contamination	Temporary							*	Negligible
		Process waste contamination	Temporary							*	Negligible
	Decommissioning and Restoration	Hydrocarbon contamination	Short term temporary							*	Negligible

\* **Geographical Level of Importance**

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