

## 15. SUMMARY & CONCLUSIONS

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### 15.1 Introduction

15.1.1 This concluding section of the ES draws together the results of the foregoing assessment. It describes the disciplines addressed, identifies the likely significant effects and summarises further mitigation measures required and recommended.

### 15.2 Residual Impacts

15.2.1 The fundamental aim of the EIA process is to identify, assess and evaluate the significant environmental impacts of a project with a view to developing methods of mitigating these effects. The ultimate goal is thus to achieve a scheme design that has no significant residual environmental impacts.

15.2.2 In addition to the residual negative impacts, the development will have some beneficial effects and these have been identified in the various chapters.

15.2.3 The principal benefit of the proposed development, however, would be to:

- ) Generate a new reliable local, low carbon electricity supply to sustain and promote the growth of local businesses.
- ) Generate a new reliable local, source of heat to sustain and promote local businesses.
- ) Move the management of waste up the waste hierarchy through recovery of renewable, low carbon energy from waste left over after recycling, which would otherwise be landfilled or exported abroad.
- ) Support the development of the Hownskill Masterplan to aid in the regeneration and provision of new jobs in the area.

15.2.4 Chapters 6 to 14 of this document have considered the potential impact of the proposed development relative to current baseline conditions that exist at the site and its surroundings. Where appropriate, mitigation measures over and above those already proposed in the scheme have been proposed within the individual chapters, and the residual effects of the development including mitigation have been assessed.

15.2.5 The following sections summarise the assessments undertaken and their findings. The summary takes account of the proposed mitigation measures and therefore includes only residual environmental effects.

### **Need & Alternatives**

- 15.2.6 The process and decisions underpinning the need for the facility, the choice of technology and alternative sites considered have been identified, described and evaluated. The conclusions of the assessment are set out below.
- 15.2.7 The NPPW paragraph 7 sets out policy to assist waste planning authorities in the determination of planning applications. Within this requirement, applicants only need to demonstrate market need for a proposed facility if it conflicts with the Local Plan of the area. In such a case, the waste planning authority should consider the extent to which operational facilities (i.e. not merely 'planned') can satisfy any identified need.
- 15.2.8 The proposed Energy Facility does not conflict with the Durham County Council Waste Strategy and Local Plan.
- 15.2.9 This assessment has, however, also demonstrated that there is both a national, regional and local need for residual commercial and industrial waste management facilities within Durham.
- 15.2.10 The proposed development produces up to 3.48MWe of electrical energy, providing valuable and reliable domestic energy source which reduces reliance on fossil fuels. Energy produced from waste is also recognised as contributing towards the Government's renewable energy targets.
- 15.2.11 With regard to the assessment of alternative locations, the proposed development is compliant with the locational requirements set out within Appendix B of the National Planning Policy Guidance on Waste and the locational requirements set out in local policy documents.
- 15.2.12 Firstly, the facility will accept small amounts of residual materials from a number of local suppliers and the proposed location is within a suitable distance of all of these market-based suppliers.
- 15.2.13 Secondly, the development of an energy-generating development on the industrial estate is part of a wider plan to attract inward investment to Consett through the availability of reliable and cheaper energy supply at the site and from adjacent energy developments. It is already proposed to provide heat to an adjacent strategic development which has recently secured outline planning permission. The wider masterplan has been accepted by Durham County Council and is included in the adopted Local Plan. It is therefore concluded that there are no more suitable locations for the proposed use within the region.
- 15.2.14 The final layout has been derived from a detailed analysis of both operational and environmental needs.

15.2.15 It is concluded that the proposed development fulfils an established need and that there are no more suitable locations, technologies or layouts for the proposed development.

### **Landscape and Visual Impact**

15.2.16 Chapter 7 of the ES has assessed both the landscape and visual impacts of the proposal, the conclusions are summarised as follows:

#### *Construction*

15.2.17 Works involved during the construction period would include temporary and permanent works to build the new facility. In general, the activities and effects associated with the construction period are predicted to be broadly similar and no worse than the effects predicted at year 1 of the operational phases.

#### *Landscape Character*

15.2.18 The existing character of the site is defined by its restored nature forming part of an area which is intended for future development. The overall character of the area is mixed and typical of urban fringes where there are varied land uses and features. Land to the south and south west beyond the urban fringe is more rural and more so toward the edge of the study area and beyond into the North Pennines AONB. However, the landscape is influenced by its industrial past and is interspersed with relic features and land restoration. In addition, there are various existing prominent modern developments present including industrial buildings at Hownskill Park, a consented solar farm to the south, settlement on high ground and wind turbines in the wider surroundings which affect the overall landscape character and sensitivity. The proposed development fits with this existing pattern of development in a suitable location adjacent to other similar development on the edge of a settlement.

15.2.19 The LPA has anticipated expansion of the settlement edge for business use development similar.

15.2.20 The proposed development would not affect any important landscape features on the site or immediately adjacent. There are prominent natural landscape features in the local area which include semi mature trees to the northwest of the site. These will be unaffected by the proposed development and it is proposed that tree cover will be enhanced by planting on the development site.

#### *Residual Visual Effects*

15.2.21 The extent of change in views is limited by the existing urban fringe character and nature of views in the locality, on the whole changes beyond the immediate surroundings are anticipated to be

minor adverse. The provision of inherent design mitigation and soft landscaping to provide filtering of views and for general amenity will be beneficial in reducing residual effects.

15.2.22 Views generally from locations in the surrounding area will comprise an increased amount of built form of industrial character and tall vertical elements on the skyline. The site benefits from screening provided by existing raised ground and semi-mature woodland on land immediately adjacent alongside the Consett and Sunderland, which will continue to develop in future years to provide further screening. Built development is commonplace in views from locations through the study as is typical of this urban fringe location on the edge of Consett. Buildings typically appear amongst trees and woodland on sloping landform and is notable on high ground to the northeast and northwest of the site. There are various prominent and detracting features in most views from the surrounding area, these include existing development industrial type buildings at Hownskill Park, individual wind turbines and settlements, overhead lines and supporting steel lattice towers crossing the landscape.

15.2.23 There will be long term residual visual effects as a result of the development pertaining to the appearance of the upper part/roofline of the proposed buildings and the stack, which will be visible from the majority of directions around the site and are not considered significant. These will mainly affect receptors/shorter distance views from locations in close proximity. There will be some minor residual effects on longer distance views such as those from high ground to the southwest/west but seen in the urban fringe setting comprising varied prominent elements this is not significant and will reduce slightly in future years as a result of mitigation planting

### **Geo-Environmental**

15.2.24 Chapter 8 of this ES assesses the proposed developments impact on Geo-Environmental conditions. The chapter outlines the design, construction and operation of the proposed development and its associated environmental enhancement measures, which are assessed below.

15.2.25 As part of the site preparation works, a site strip will be undertaken along with removal of any existing obstructions. This will remove potential unforeseen contamination sources leading to environmental betterment. Unforeseen contaminated soils are considered to have Minor magnitude whilst the significance of the controlled waters is considered Minor. Based on this impact without mitigation is considered to be Minor Adverse. Impact following design mitigation will be Minor Beneficial.

15.2.26 Unforeseen contaminated soils are considered to have Minor magnitude whilst the significance of end users is considered Minor based on the commercial end use. Based on this impact without

mitigation is considered to be Minor Adverse. Impact following design mitigation will be Minor Beneficial

- 15.2.27 Potential risk to construction workers will be managed through the use of normal management and hygiene practices together with appropriate personal protective equipment. This will follow the normal health and safety hierarchy of protection. Unforeseen contamination is considered to have Minor magnitude whilst the significance of the construction workers considered Major. Based on this impact without mitigation is considered to be Major Adverse. Impact following design mitigation will be Neutral.
- 15.2.28 The use of bound pavement construction and solid building floor slabs will provide greater encapsulation of the site and contribute to breaking the potential pollutant linkage with future site users. No contamination has been identified and so impact is Neutral.
- 15.2.29 Where deep foundations are proposed the risks of creating a preferential flow path will be addressed through the use of a piling risk assessment. As no contamination risk has been identified impact to controlled waters is considered Neutral.
- 15.2.30 During the operational stage risks from potential release of fuels and chemicals will be mitigated through the use of containment bunds to storage areas in accordance with Environment Agency guidance.
- 15.2.31 Fuels and chemicals will not be stored near to water courses.
- 15.2.32 Spill response kits will be available on site and will be used should localised spillage or leakage occur. The site will be subject to regular inspections and any localised spillage identified and removed.
- 15.2.33 As operational activities will be undertaken in accordance with appropriate practices. Impact following implementation of the design mitigation measures will be Neutral.
- 15.2.34 Foundations will be designed to transfer loads through Made Ground and in to competent soils and rock. It is considered to have Minor magnitude whilst the significance to the structures is considered Moderate. Based on this impact without mitigation is considered to be Minor/Moderate Adverse. Impact following design mitigation will be Neutral.
- 15.2.35 No significant risk from coal mining activities have been identified and so impact is considered Neutral.

## **Noise**

- 15.2.36 The assessment contained within chapter 9 of the Environmental Statement has considered the potential of the proposed development to give rise to noise impacts at the identified sensitive receptors close to the application site.
- 15.2.37 Noise levels during construction operations would remain below the levels derived in accordance with the guidance contained in BS5228.
- 15.2.38 Vibration levels during construction operations would remain well below the level at which vibration might just be perceptible in residential environments.
- 15.2.39 The BS4142 assessment of operational noise levels, including site operations and vehicle movements, would remain below the prevailing background noise levels at all residential receptors assessed during the daytime. However, overnight, predicted noise levels would exceed the prevailing background noise levels, mitigation measures to reduce this exceedance to a minimum have been included within the design.
- 15.2.40 The BS833 assessment of operational noise levels at nearby receptors has shown that:
- 15.2.41 Predicted internal noise levels at nearby offices would fall within the design range adopted for the assessment of internal noise levels in non-domestic buildings prior to the application of the mitigation measures suggested.
- 15.2.42 predicted internal noise levels at the nearby residential receptors would meet the guideline value for sleeping in bedrooms prior to the application of the mitigation measures suggested.
- 15.2.43 The cumulative impact assessment has shown that the proposed development would have no significant impact on the ambient noise levels at the receptors assessed.
- 15.2.44 Based on the results of the assessment and conclusions drawn, noise and/or vibration should not pose a material constraint for the proposed development.

## **Air Quality & Human Health**

- 15.2.45 The air quality assessment is set out in chapter 10 of this ES. The conclusions of the assessment are as follows.

### *Construction*

- 15.2.46 The assessment has concluded that the additional heavy vehicle movements on local roads generated during the construction stages will be well below the EPUK/IAQM screening criterion

(100 AADT) for potentially significant impacts on air quality at existing locations. It was therefore, not considered necessary to assess the impacts of construction traffic emissions further.

15.2.47 The construction works would have the potential to create dust. The assessment has therefore applied a package of mitigation measures to minimise dust. The implementation of these mitigation measures will ensure that any residual effects will not be significant.

### *Operation*

15.2.48 The proposed facility will include all necessary emissions abatement and continuous emissions monitoring to ensure that the installation complies with the relevant emission limits. This will be a requirement of the environmental permit, regulated by the Environment Agency, that must be issued in order for the facility to operate.

15.2.49 Dispersion modelling of a number of pollutants was undertaken using ADMS 5.2. Impacts at both human and ecological receptors were quantified and the results compared with the relevant limits. The operational air quality effects of the proposed development on both human health and designated ecosystems (both individually and in combination) are judged to be 'not significant'.

15.2.50 An assessment of operational traffic both in isolation and in combination with other road users has been undertaken. The assessment concludes that as the increases in road traffic are well below the screening thresholds for potentially significant impacts on air quality, it can reasonably be assumed that the increase in roadside concentrations that the additional traffic will generate will be no greater than that which will trigger a negligible impact regardless of baseline concentrations.

15.2.51 Potential odour impacts associated with waste handling at the development are predicted to be, at worst, negligible at all receptors with the implementation of both integral and additional mitigation measures.

15.2.52 The air quality assessment has confirmed that a 50m stack is regarded as being an option that gives acceptable environmental performance and is acceptable under BAT (Best Available Technique) as required by the Environment Agency.

### **Water Environment**

15.2.53 Chapter 11 of the Environmental Statement assesses the proposed developments potential impact on the water environment. The findings of the report are summarised below:

*Flood Risk*

- 15.2.54 The risk of surface water flooding is assessed as negligible for the Site but medium for the access/egress.
- 15.2.55 The risk of flooding from all other sources is assessed as negligible.

*Mitigation Measures*

- 15.2.56 The risk of surface water flooding affects the access/egress but would still be accessible by emergency services. Flood risk along the access/egress route will be mitigated to a low and acceptable level through the implementation of a basic Flood Evacuation and Management Plan.
- 15.2.57 Residual flood risk would be mitigated through the following approach:
- ) Adoption of a surface water management strategy.
  - ) The finished floor levels above external levels.

*Flood Guidance*

- 15.2.58 The proposed use is classified as essential infrastructure. Essential infrastructure uses are considered acceptable in terms of flood risk in Flood Zone 2. Subject to the implementation of the above mitigation measures, the Sequential Test would be passed, and the Exception Test would not be required.

*Site Drainage*

Surface Water

- 15.2.59 The proposed development will increase the area of impermeable surfaces and therefore increase the amount of runoff without mitigation.
- 15.2.60 Surface water runoff from the Site will be restricted rate, which offers a betterment to existing conditions with uncontrolled runoff across all return periods.
- 15.2.61 Surface water runoff from the proposed development would be attenuated on-site up to and including the 1 in 100-year event, plus 40% climate change.
- 15.2.62 A SuDS drainage scheme is proposed to manage excess runoff from the development using cellular storage, with a connection to the adjacent private surface water sewer.

Foul Water

- 15.2.63 It is proposed that foul flows will discharge to the adjacent private foul sewer.



15.2.64 The assessment demonstrates that the proposed development will operate with minimal risk from flooding, will not increase flood risk elsewhere and is compliant with the requirements of national and local policy guidance.

### **Climate Change**

15.2.65 Chapter 12 of this ES sets out the proposed development effects on Climate Change.

15.2.66 A raft of legislation and guidance has emerged within the last few years which reinforce the Government's commitment towards addressing both the cause and consequence of climate change. The review of the sustainability and needs objectives clearly demonstrate that there is an increasing urgency to develop a range of energy proposals which reduce reliance on fossil fuels in order to reduce the generation of CO2 emissions and to firm up England's energy supply.

15.2.67 The proposed development will reduce the methane emissions associated landfilling which has a significant Global Warming Potential.

15.2.68 The proposed development will also offset carbon used in the production of energy, working towards the Governments low carbon goals.

15.2.69 In addition, the impacts of climate change on the proposed development have been considered within relevant technical assessments, and this confirms that the proposed development is appropriate for the application site.

15.2.70 It is therefore concluded that the proposed development will have a minor beneficial impact on climate change.

### **Socio Economic**

15.2.71 Chapter 13 of this ES sets out the proposed developments effects on the socio-economic context of the area.

15.2.72 The baseline assessment shows that the wider area has:

- ) Moorside East has lower than average levels of economically active people.
- ) It has higher than average levels of unemployment.
- ) It ranks within the bottom 10% for living environment domain.
- ) It ranks poorly for overall access to housing and services.

- 15.2.73 The proposed development is part of a wider masterplan for employment at Howngill Industrial Estate. The provision of stable low carbon energy and heat will attract local investment providing much needed regeneration and jobs to the area.
- 15.2.74 The proposed development will also provide businesses with a sustainable and cost-effective way to manage wastes which cannot be recycled.
- 15.2.75 It is therefore concluded that the proposed development will have a moderate beneficial impact on socio economic indicators.

### **Amenity**

- 15.2.76 Chapter 14 of this ES assesses the overall impacts on the proposed development on amenity. The assessment considered the impacts of the following:
  - ) Mud, litter, dust , waste, noise and vehicle emissions during construction; and,
  - ) Odour, noise, litter & vermin, heat and emissions during the operational stages.
- 15.2.77 The assessment has demonstrated that integral design features of the proposed development and with suitable additional mitigation measures, the proposed development will have a negligible impact on the site and wider surroundings.

### **15.3 Combined Effects (Interactions between impacts)**

- 15.3.1 The EIA Regulations specify that interactions between various aspects of impact should be considered. This has been done at various stages in this ES and is discussed within specific chapters. Examples of these types of assessment include:
  - ) The potential effects of deposition on land or water resulting from emissions to air (including the potential accumulation of substances over time) on ecology and human health are assessed within chapter 10 (air quality and human health).
  - ) The potential effects of the proposal on the hydrology (chapter 11) and hydrogeology (chapter 8) on the site and surroundings.
  - ) The effects on climate change and amenity have been considered throughout the technical chapters and are summarised in chapters 12 (climate change) and 14 (amenity).

### **15.4 Cumulative Impacts**

- 15.4.1 Consideration of the cumulative impact of the development with other developments that may be constructed contemporaneously with the proposed development is a specific requirement of the

EIA Regulations. A study of known proposed developments in the locality that could result in cumulative impacts are outlined in chapter 2.

15.4.2 Table 15.1 summarises the identified developments and the topic areas where cumulative impacts have the potential to arise and have been assessed within the relevant Chapters of this Environmental Statement.

**Table 15.1 Potential Cumulative Effects**

Scheme	Landscape	Geo	Noise	Air Quality	Hydrology	Climate Change	Socio Economic	Amenity
1. B1/B2 development to the south of access road	Y	N	Y	N	Y	N	Y	Y
2. Proposed solar farm	Y	N	N	N	N	N	N	N
3. Mixed use development to the north west	N	N	N	N	N	N	Y	Y
4. Waste Transfer Station	N	N	N	N	N	N	N	N

**15.5 Summary of Recommended Additional Mitigation Measures**

15.5.1 The prevention or reduction of the environmental impacts of a project is regarded as one of the major benefits of EIA. The Environmental Impact Assessment process for the Energy Facility Proposal has been integrated into the design of the project and this has enabled the early identification of potential impacts and allowed recommended mitigation measures to be incorporated into the project design.

15.5.2 Details of these measures are provided within individual chapters and examples include:

- ) The design of the stacks at a height which is at the identified optimal height under BAT to ensure that air pollution effects during operation are minimal;
- ) The use of design specific flue gas treatment;
- ) The addition of noise mitigation technology to reduce sounds generated by the proposed development;
- ) The location of the built structures within the centre of the allocated employment area to limit impacts on the landscape.

15.5.3 As a result of this integrated process, the additional mitigation measures, over and above those incorporated within the development proposals, recommended as a result of the impact assessments are limited. They are summarised below.

### **Construction**

- ) Wheel washing provision for vehicles moving on and off the site.
- ) The use of 'Best Practicable Means' to minimise noise and dust impacts during construction.
- ) Provision of Construction Management Plan.
- ) The development of a detailed Site Waste Management Plan prior to construction.
- ) Provision of suitable site lighting.

### **Operation**

- ) The provision of a landscaping strategy to incorporate planting to the south west of the site.
- ) Provision of a detailed drainage strategy and flood evacuation plan associated with the access road to ensure effective management of surface water.
- ) Regular inspection of tanks, bunds, hardstanding and subsurface structures (e.g. pipe-work, drains, interceptors etc) in order to assess the ongoing integrity of all pollution prevention features included in the facility design.

## **15.6 Summary of Outcomes**

15.6.1 The following table summarises the residual environmental impacts that may result from the proposed development. The identification of impact, whether adverse or beneficial, of negligible, minor, moderate or major significance is a professional judgement based on the authors experience and knowledge and the guidelines relevant to assessment methodology for individual topics.

15.6.2 In instances where the terminology contained in the ES chapters has been varied (due to required methodology), the following terms have been used within this chapter to allow comparison:

- ) Neutral has been replaced with Negligible;
- ) Low has been replaced with Minor;
- ) The air quality chapter has used the term 'not significant' this has not been altered.

**Table 15.2 Residual Effects**

Resource	Nature of Effect	Significance of impact	Magnitude of impact	Duration	Mitigation	Residual Impact	Level
Landscape: Landscape Effects							
Construction	Localised levelling and modification of on site landform	Neutral	Negligible	Permanent	Inherent mitigation, reuse materials to form low perimeter bunds for screening	Neutral	Local
Operation	Change in land use and land cover on the site.	Minor	Medium	Permanent	Within an established employment area. Soft landscaping proposed.	Minor (Positive effect on tree cover in future years)	Local
Operation	Townscape/landscape character types	Neutral	Negligible	Permanent	Inherent design, enhancement of tree planting to site boundaries.	Neutral (Positive localised effect on tree cover in future years).	Local
Operation	Impacts to protected landscapes/setting - North Pennines AONB	Neutral	Negligible	Permanent	Inherent design/siting.	Neutral	Regional/Local
Landscape: Visual Effects -Representative Viewpoints							
Operation	VP1 Consett and Sunderland Railway Path	Minor Adverse	Low	Permanent/ life of the development	Inherent design/siting adjacent to semi mature woodland and in established industrial area. New tree planting to site perimeters.	Minor adverse, potentially reducing in future years. Benefits from screening provided by (future maturing) woodland on adjacent land .	Local

Operation	VP2 Ovington Court	Minor Adverse	Low	Permanent/ life of the development	Inherent design/siting adjacent to semi mature woodland and in and established industrial area.	Minor adverse, potentially reducing in future years resulting from screening provided by (future maturing) tree planting on NE boundary of Hownskill Park.	Local
Operation	VP3 Consett & Sunderland Railway Path	Minor Adverse	Low	Permanent/ life of the development	Inherent design/siting adjacent to semi mature woodland and in and established industrial area.	Minor adverse, potentially reducing in future years. Benefits from screening provided by (future maturing) woodland adjacent to C2C path.	Local
Operation	VP4 Knitsley Lane	Minor Adverse	Low	Permanent/ life of the development	Inherent design/siting. New tree planting to site perimeters.	Minor adverse.	Local
Operation	VP5 Footpath [056 22]	Minor Adverse	Low	Permanent/ life of the development	Inherent design/siting, colours/materials. New tree planting to site perimeters.	Minor adverse.	Local
Operation	VP6 Footpath [056 24]	Minor Adverse	Low	Permanent/ life of the development	Inherent design/siting. New tree planting to site perimeters.	Minor adverse	Local
Operation	VP7 Lanchester Valley Railway Path and Footpath [023 78]	Minor Adverse	Low	Permanent/ life of the development	Inherent design/siting. New tree planting to site perimeters.	Minor adverse/Neutral	Local
Operation	VP8 Footpath [069 41],	Neutral	Negligible	Permanent/ life of the development	Inherent design/siting. New tree planting to site perimeters.	Neutral. Long term benefit from additional tree cover screening from	Local

						mitigation planting	
Operation	VP9 Millershill Lane	Minor Adverse	Low	Permanent/ life of the development	Inherent design/siting. New tree planting to site perimeters.	Minor adverse	Local
Operation	VP10 Whitehall Moss (location in N Pennines AONB)	Neutral	Negligible	Permanent/ life of the development	Inherent design/siting. New tree planting to site perimeters	Neutral. Long term benefit from additional tree cover screening from mitigation planting	Local/Regional
Operation	VP11 Footpath [056 11], Castleside	Minor Adverse	Low	Permanent/ life of the development	Inherent design/siting adjacent to semi mature woodland	Minor adverse, potentially reducing in future years. Benefits from screening provided by (future maturing) woodland on adjacent land .	Local
Operation	VP12 Roundabout at Rotary Way/ A692	Minor Adverse	Low	Permanent/ life of the development	Inherent design/siting adjacent to semi mature woodland and in and established industrial area.	Minor adverse, potentially reducing in future years resulting from screening provided by (future maturing) tree planting on NE boundary of Hownskill Park.	Local
Operation	VP13 A68 Mosswood (edge of N Pennines AONB)	Minor Adverse	Low	Permanent/ life of the development	Inherent design/siting. New tree planting to site perimeters	Minor Adverse	Local/Regional
Operation	VP14 South Snods	Neutral	Negligible	Permanent/ life of the development	Inherent design/siting. New tree planting to site perimeters	Neutral	Local

Operation	VP15 Minor Road, Shotleyfields	Neutral	Negligible	Permanent/ life of the development	Inherent design/siting. New tree planting to site perimeters	Neutral	Local
Operation	VP16 Healeyfield Road (N Pennines AONB)	Neutral	Negligible	Permanent/ life of the development	Inherent design/siting. New tree planting to site perimeters	Neutral	Local/Regional
Operation	VP17 Smiddy Shaw (N Pennines AONB)	Neutral	Negligible	Permanent/ life of the development	Inherent design/siting. New tree planting to site perimeters	Neutral	Local/Regional
Operation	VP18 A68 east of Whitehall Moss	Minor Adverse	Low	Permanent/ life of the development	Inherent design/siting. New tree planting to site perimeters	Neutral	Local
Operation	VP19 A691 Woodside Bank	Neutral	Negligible	Permanent/ life of the development	Inherent design/siting. New tree planting to site perimeters	Neutral	Local
Air Quality and Human Health							
Air Quality Construction	Human health	N/A	N/A	Temporary	See Appendix 9.1	Not Significant	Local
Air Quality Construction	Nuisance Dust	N/A	N/A	Temporary	See Appendix 9.1	Not Significant	Local
Air Quality Construction	Ecosystems	N/A	N/A	Temporary	See Appendix 9.1	Not Significant	Local
Air Quality Operation	Human health	Not Significant	N/A	Permanent	None	Not Significant	Regional
Air Quality Operation	Ecosystems	Not Significant	N/A	Permanent	None	Not Significant	Regional
Geo Environmental							



Geo Env Preparation.	Unforeseen contamination on end users.	Minor	Minor	Permanent	Site Strip and removal.	Minor Beneficial	Local
Geo Env Preparation.	Unforeseen contamination on controlled waters.	Minor	Minor	Permanent.	Site Strip and removal.	Minor Beneficial	Regional
Geo Env Preparation.	Unforeseen contamination on construction workers.	Major	Minor	Temporary	Management procedures	Negligible	Local
Geo Env Construction	Contamination	Negligible	Negligible	Permanent	Not Required	Negligible	Local
Geo Env Construction	Creation of new pathway	Negligible	Negligible	Permanent	Not Required	Negligible	Local
Geo Env Construction	Settlement of buildings	Moderate	Minor	Permanent	Appropriate foundation design	Negligible	Local
Geo Env Construction.	Mining subsidence	Negligible	Negligible	Permanent	Not Required	Negligible	Local
Geo Env Operation	Oil and chemical release to controlled waters	Moderate	Minor	Temporary	Use of banded storage and management practices	Negligible	Local.
Noise							
Noise Construction	Residential	Minor Adverse	Minor	Temporary	BAT	Minor	Local
Noise Operation	Residential	None	None	Permanent	Silenced stacks	Negligible	Local
Water Environment							

<p>Water Environment Construction</p>	<p>Aquifer/Groundwater (Water Quality, Flood Risk)</p> <p>Surface Water (Water Quality, Flood Risk)</p>	<p>Not Significant</p>	<p>Minor/moderate adverse</p>	<p>Temporary</p>	<p>Follow good practice guidelines.</p> <p>Implement good environmental practice.</p> <p>Consideration of waste storage and disposal.</p> <p>Adoption of a Surface Water Management (SuDS) scheme.</p> <p>Develop a Construction Environmental Management Plan (CEMP).</p>	<p>Negligible</p>	<p>Local</p>
<p>Water Environment Operational</p>	<p>Aquifer/Groundwater (Water Quality, Flood Risk)</p> <p>Surface Water (Water Quality, Flood Risk)</p>	<p>Not Significant</p>	<p>Minor/Moderate Adverse</p>	<p>Temporary</p>	<p>Follow good practice guidelines.</p> <p>Implement good environmental practice.</p> <p>Consideration of waste storage and disposal.</p> <p>Adoption of a Surface Water Management (SuDS) scheme.</p> <p>Develop a Construction Environmental Management Plan (CEMP).</p>	<p>Negligible</p>	<p>Local</p>

Climate Change							
Climate Change Construction	GHG	Minor	Minor	Temporary	Best Practice	Minor adverse	International
Climate Change Operation: Energy Centre	GHG	Minor Adverse	Minor Beneficial	Permanent	Monitor and control emissions	Minor beneficial	International
Climate Change Operation: Climate Change Resilience	Air Quality Flood Risk	Minor Adverse	Minor Adverse	Permanent	Monitor and Control Emissions/ Environment	Negligible	Regional
Socio Economic							
Socio Economic Construction	Employment	Moderate beneficial	Minor	Temporary	Advertise opportunities locally	Moderate Beneficial	Local/Regional
Socio Economic Construction	Local Economy	Moderate Beneficial	Minor	Temporary	Advertise opportunities locally	Moderate Beneficial	Local/Regional
Socio Economic Construction	Environmental Impacts	Minor Adverse	Minor	Temporary	As set out in technical chapters to this ES	Negligible	Local
Socio Economic Operation	Environmental Impacts	Minor Adverse	Minor	Permanent	A set out in technical chapters of this ES	Negligible	Local
Socio Economic Operation	Employment	Moderate Beneficial	Moderate	Permanent	Advertise opportunities locally	Moderate Beneficial	Local/Regional
Socio Economic Operation	Local Economy	Moderate Beneficial	Moderate	Permanent	Advertise opportunities locally	Moderate Beneficial	Local/Regional



Amenity							
Amenity Construction	Environmental Impacts	Minor Adverse	Minor Adverse	Temporary	On Site Management and best practice	Negligible	Local
Amenity Operation	Environmental Impacts	Minor Adverse	Minor Adverse	Permanent	On Site Management and best practice	Negligible	Local

## **15.7 Commitment to Mitigation**

- 15.7.1 Project Genesis Ltd is committed to ensuring that the construction and operation of the proposed Energy Facility takes place with minimum environmental impact. The additional mitigation measures, over and above those incorporated within the development proposals, recommended as a result of the impact assessments are summarised in section 15.5 above.
- 15.7.2 The additional mitigation measures identified primarily relate to the construction phase. In addition an Environmental Management Strategy including a detailed Site Waste Management Plan (SWMP) will be submitted to Durham County Council prior to the commencement of construction works.
- 15.7.3 During the operation of the plant, regular inspection of emissions to air, bunds, hardstanding and subsurface structures (e.g. pipe-work, drains, interceptors etc) will be carried out in order to assess the ongoing integrity of all pollution prevention features included in the facility design.

## **15.8 Consideration of Major Accident or Disaster**

- 15.8.1 In addition to the assessment of Impacts, the ES must consider risks of major accidents and disasters.
- 15.8.2 Environmental risks, such as flooding or high winds have been considered during the design stages and assessed as part of individual chapters.
- 15.8.3 Ground stability has been considered as part of chapter 8 of this ES.
- 15.8.4 Environmental controls will ensure that the risk of explosion and fires are minimised in accordance with Environment Agency guidelines.

## **15.9 Approach to Environmental Management & Control**

- 15.9.1 Management control of the Energy Facility and associated mitigation measures will be ensured by the two complementary control systems:
- ) Planning conditions and legal agreements enforced by Durham County Council; and,
  - ) The Environmental permit granted and enforced by the Environment Agency.

## **15.10 Conclusions**

- 15.10.1 The Environmental Impact Assessment has considered the likelihood of significant environmental impacts occurring from the development of the proposed Energy Facility upon the site itself and its surroundings. The environmental issues addressed as part of the scheme have been identified through consultation with the Council and other organisations.

15.10.2 The evidence from the Environmental Statement would indicate that there is no reason why planning permission should not be granted. It has shown that the proposed development alongside the identified mitigation measures embodied within the project design, or imposed through planning conditions will limit any impacts identified resulting in a moderate beneficial to minor adverse impact overall.

15.10.3 The applicant has demonstrated a commitment through the Environmental Statement, to mitigation measures and these would be implemented through planning conditions attached to any planning approval.

## References

- ) The Town and Country Planning (Environmental Impact Assessment) (England) Regulations 2017.