

## Chapter 16

### Summary of Residual Effects



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## 16. Summary of Residual Effects

### 16.1 Introduction

16.1.1 This chapter provides a summary of the residual effects following the implementation of the embedded and any additional mitigation measures as required. Full details can be found in the respective topic chapters of this PEIR.

### 16.2 Summary of Mitigation Measures

16.2.1 Schedule 4, part 7 of the EIA Regulations requires an ES to include “A description of the measures envisaged to avoid, prevent, reduce or, if possible, offset any identified significant adverse effects on the environment and, where appropriate, of any proposed monitoring arrangements (for example the preparation of a post-project analysis).”

16.2.2 The mitigation, monitoring and enhancement measures included in this PEIR fall into one of the following categories:

- Embedded mitigation incorporated into the design, such as the height of the stack;
- Embedded mitigation in methods of construction as included within the Outline CEMP (Appendix 3.1); and
- Additional mitigation measures identified as a result of the EIA, such as topic specific management plans.

16.2.3 A topic summary of the key issues addressed by the PEIR and the mitigation measures identified has been included in Table 16.1.

### 16.3 Residual Effects

16.3.1 The residual effects of the Power Generation Plant, Gas Connection, Electrical Connection, and the Project as a whole following implementation of the mitigation measures have been assessed.

16.3.2 Each technical chapter contains a detailed account of residual effects and section 16.3 summarises the main residual effects. The criteria for assigning the significance of effects are set out in section 4.6 of this PEIR and within relevant technical chapters where a different, topic-specific approach is followed.

16.3.3 Note, as set out in **Chapter 4: Approach to Environmental Impact Assessment**, Negligible effects are not considered to be residual and have therefore not been included in the residuals table for each technical chapter or in Table 16.1 below. **Minor** effects are not considered significant, and **Moderate** and **Major** Effects are considered significant.

16.3.4 The Project will result in the following beneficial residual effects:

- Socio-Economic: There will be **Negligible** beneficial effects on the labour market due to employment produced through the Project, during both construction and operation.
- Traffic: There will be temporary **Minor** effects on Weekday traffic on the M4 during the AM Peak Hour.
- Ground Conditions, Geology & Hydrogeology: There will be **Minor** beneficial effects where the previously worked land and known mine workings are stabilised if / where discovered and remediated if required.

16.3.5 The PEIR has also identified a number of adverse effects that will mainly occur during construction which will include the following:

**Table 16.1: List of adverse residual effects**

Discipline	Residual Effect
Air Quality	<ul style="list-style-type: none"> <li>There will be <b>Negligible</b> effects during construction, operation and decommissioning for all components of the Project.</li> </ul>
Noise and Vibration	<p><u>Construction of the Project</u></p> <ul style="list-style-type: none"> <li>The construction of the Project will have a <b>Minor adverse</b> effect on one Noise Sensitive Receptor.</li> </ul> <p><u>Operation of the Power Generation Plant</u></p> <ul style="list-style-type: none"> <li>The noise from the operation of the Power Generation Plant will have a <b>Minor adverse</b> effect during daytime and night-time.</li> </ul>
Ecology	<p><u>Construction of the Power Generation Plant</u></p> <ul style="list-style-type: none"> <li>There will be permanent <b>Minor adverse</b> habitat loss to Broadleaved Woodland, trees, and Semi-Improved Natural Grassland.</li> <li>There will be a permanent <b>Minor adverse</b> effect on Invertebrates, Amphibians, Breeding Birds, due to potential loss of habitats, including breeding, foraging, and sheltering habitats.</li> <li>There will be permanent <b>Minor adverse</b> habitat loss to Llety-Morfil SNCI, Marshy Grassland, removal of two ponds, and approximately 140 m of hedgerows.</li> <li>There will be a permanent <b>Minor adverse</b> effect on Reptiles and Badgers caused by the removal of habitats.</li> <li>There will be a temporary <b>Minor adverse</b> effect on Water Vole from noise and disturbance from construction activities</li> <li>There will be a temporary <b>Minor adverse</b> effect on Otter from disturbance from construction activities</li> <li>There will be potential for <b>Minor adverse</b> effects to Bats due to removal of habitat and disturbance to hibernation roosts, potential severance and disturbance from localised night time illumination in winter months.</li> <li>There will be potential for <b>Minor adverse</b> effects to Breeding Birds due to localised night time illumination in winter months</li> </ul> <p><u>Construction of the Gas Connection</u></p> <ul style="list-style-type: none"> <li>There will be temporary <b>Minor adverse</b> habitat loss to Dense/Continuous Scrub, Semi-Improved Neutral Grassland</li> </ul>

Discipline	Residual Effect
	<ul style="list-style-type: none"> <li>• There will be permanent <b>Minor adverse</b> habitat loss to trees</li> <li>• There will be temporary <b>Minor adverse</b> effects Reptiles, Invertebrates, and Amphibians through the temporary loss of habitats.</li> <li>• There will be temporary <b>Minor adverse</b> effects to Breeding Birds from noise, loss of habitat and localised night time illumination in winter months</li> <li>• There will be a <b>Minor adverse</b> temporary habitat loss to broadleaved, one pond, and up to 180 m of Hedgerows.</li> <li>• There will be a <b>Minor adverse</b> effect to Badgers and Otters from potential to harm via construction activities.</li> <li>• There will be potential <b>Minor adverse</b> effects to Bats due to temporary removal of foraging habitat and disturbance from construction activities.</li> <li>• There is a <b>Minor adverse</b> effect from the potential for construction activities to spread invasive species.</li> </ul> <p><u>Construction of the Electrical Connection</u></p> <ul style="list-style-type: none"> <li>• There will be temporary <b>Minor adverse</b> effects to Breeding Birds from noise and localised night time illumination in winter months.</li> <li>• There is the potential for Otters to be effected due to construction of the Electrical Connection which is within 10 m of several watercourses. This is classified as a <b>Minor adverse</b> effect.</li> </ul> <p><u>Operational Phase of the Power Generation Plant</u></p> <ul style="list-style-type: none"> <li>• Bats and Invertebrates will experience <b>Minor adverse</b> effects from the operation lighting.</li> </ul>
Water Quality and Resources	<p><u>Construction of the Project</u></p> <ul style="list-style-type: none"> <li>• There is a potential <b>Negligible</b> effect from discharging water from construction excavations containing increased pollutants and sediment loads from movement of materials to all identified receptors with the exception of the Loughor Estuary, which was considered to have a <b>Minor</b> adverse effect.</li> </ul> <p><u>Operation of the Power Generation Plant</u></p> <ul style="list-style-type: none"> <li>• Effects from surface water runoff from impermeable areas and disruption of water storage and flow from the presence of the Generating Equipment Site on the Afon Llan and its tributaries are predicted to be <b>Minor adverse</b>.</li> </ul>

Discipline	Residual Effect
<p>Geology, Ground Conditions and Hydrogeology</p>	<p><u>Construction of the Power Generation Plant</u></p> <ul style="list-style-type: none"> <li>The construction of the Power Generation Plant is predicted to have <b>Minor adverse</b> effects to mineral resources, structures from stability or ground conditions, land quality, human health and controlled waters, with <b>Negligible</b> effects on agricultural land and peat deposits.</li> </ul> <p><u>Construction of the Gas Connection and Electrical Connection</u></p> <ul style="list-style-type: none"> <li>The construction of the Electrical Connection and Gas Connection are both predicted to have a <b>Minor adverse</b> effect on mineral resources for both coal and sand and gravel reserves, and a <b>Negligible</b> effect on agricultural land.</li> </ul> <p><u>Operation of the Project</u></p> <ul style="list-style-type: none"> <li>The operational phase is anticipated to have a <b>Minor adverse</b> effect all receptors from the Power Generation Plant, Gas Connection and Electrical Connection, with the exception of Power Generation Plant structures which has a <b>Minor beneficial</b> effect from the stabilisation of ground conditions as part of the presence of the Power Generation Plant.</li> </ul>
<p>Landscape and Visual Effects</p>	<p><u>Construction of the Power Generation Plant</u></p> <ul style="list-style-type: none"> <li>Effects on visual amenity from viewpoints 9, 14, 15, 16 and 17 are <b>Moderate</b> or <b>Major adverse</b>, which is significant. All other remaining viewpoints conclude <b>Minor adverse</b> effects or <b>Negligible</b>.</li> </ul> <p><u>Construction of the Gas Connection</u></p> <ul style="list-style-type: none"> <li>Construction of the Gas Connection would affect the Public Right of Way, north of Abergelli fach (viewpoint 9), resulting in a Moderate effect. This is considered to be significant, however this effect is temporary as the trench would be reinstated post-construction.</li> </ul> <p><u>Construction of the Electrical Connection</u></p> <ul style="list-style-type: none"> <li>Construction of the Electrical Connection would not have any significant effects on the landscape and visual receptors due to its location beside the Access Road and the temporary trench being reinstated after construction.</li> </ul> <p><u>Operation of the Power Generation Plant</u></p> <ul style="list-style-type: none"> <li>The Power Generation Plant would impact the same five representative viewpoints (viewpoints 9, 14, 15, 16 and 17) as during construction, with <b>Moderate to Major</b> effect, which are therefore considered significant.</li> </ul>

Discipline	Residual Effect
<p>Traffic, Transport, and Access</p>	<p><u>Construction of the Power Generation Plant</u></p> <ul style="list-style-type: none"> <li>• The majority of the transport links within the assessment will experience a <b>Minor adverse</b> effect during the peak hour for Severance, Pedestrian Delay, Pedestrian, Amenity, Fear and Intimidation, which is therefore considered not significant.</li> <li>• Effects to Link 1 and effects to footpaths which cross within the Project Site Boundary, are considered <b>Moderate</b> and therefore significant.</li> <li>• There is predicted to be an increased delay on the B4489 due to the Power Generation Plant which is considered <b>Minor adverse</b>, and a reduced delay on M4 East Bound and West Bound Off-Slip which is considered <b>Minor beneficial</b>.</li> </ul> <p><u>Construction of the Gas Connection</u></p> <ul style="list-style-type: none"> <li>• The Gas Connection is predicted to cause <b>Minor adverse</b> effects from increased HGV weekday movements at Link 1, and <b>Moderate</b> effects on footpaths due to temporary closures and pedestrian experience during construction. Effects to driver delay, Accidents and Safety and Weekday Hour are to be confirmed in the DCO Application.</li> </ul> <p><u>Construction of the Electrical Connection</u></p> <ul style="list-style-type: none"> <li>• The effect on footpaths during the construction of the Electrical Connection is expected to be <b>Moderate</b> due to temporary closures and pedestrian experience, which is considered significant. Effects to driver delay, Accidents and Safety and Weekday Hour are to be confirmed in the DCO Application.</li> </ul>
<p>Historic Environment</p>	<p><u>Construction of the Power Generation Plant</u></p> <ul style="list-style-type: none"> <li>• Construction of the Power Generation Plant will not have a physical impact on any known historic asset. No known historic assets exist within its footprint. Therefore this is a <b>Negligible</b> effect.</li> </ul> <p><u>Construction of the Gas Connection</u></p> <ul style="list-style-type: none"> <li>• Construction of the Gas Connection will not have a significant physical impact on any known historic asset, with the exception of where the Gas Pipeline crosses a small percentage of a historic boundary (feature reference AB03), therefore requiring its removal. As this feature was already substantially altered when the preceding Oil Pipeline was installed, it is considered that little of the original historic fabric remains.</li> </ul>



Discipline	Residual Effect
	<ul style="list-style-type: none"> <li>The Gas Connection will also run parallel to a second historic boundary (feature reference AB04), which coincides with the western limit of the Project Site boundary. However, a <b>Negligible</b> effect is anticipated due to the proximity of the Gas Pipeline to the historic boundary of approximately 25 m.</li> </ul> <p><u>Construction of the Electrical Connection</u></p> <ul style="list-style-type: none"> <li>Construction of the Electrical Connection will not have a physical impact on any known historic asset. No known historic assets exist within its footprint. Therefore this is a <b>Negligible</b> effect.</li> </ul> <p><u>Operation of the Power Generation Plant</u></p> <ul style="list-style-type: none"> <li>Given the intervening landscape has been significantly developed, it is not anticipated that the Conservation Area, Park and Garden and Listed Buildings will be adversely affected by the Project.</li> <li>It is anticipated that Project may be visible to the Scheduled Ancient Monument (Mynydd Pysodlyn Round Barrow) and therefore is considered to have a <b>Minor adverse</b> effect on the basis of its High value sensitivity. However this is not significant.</li> </ul>
Socio-Economics	<p><u>Construction of the Project</u></p> <ul style="list-style-type: none"> <li>The construction of all components of the Project is predicted to have little to no adverse impacts on tourism, business, and communities during construction. The National Route 43 is likely to experience Minor Adverse effects during construction, and is therefore not considered significant.</li> </ul> <p><u>Operation of the Project</u></p> <ul style="list-style-type: none"> <li>During the Operational Phase, of all components of the Project is predicted to have little to no adverse impacts on tourism, business, and communities. The National Route 43 is likely to experience <b>Minor Adverse</b> effects during construction, and is therefore not considered significant. The Project as a whole is expected to have <b>Minor adverse</b> effect on community Infrastructure receptors.</li> </ul>