11.0 Conclusion

11.1 Introduction

11.1.1 An assessment of the proposed development in respect to the scoped areas of potential environmental concern has shown that if the identified additional mitigation is implemented during the design, construction and operational stages, all of the identified environmental effects can be appropriately mitigated and reduced to a level which is not considered to be significant.

11.1.2 Detailed below are the conclusions of the post mitigation effects assessment from each chapter, together with a table summarising how all the proposed additional mitigation measures could be secured.

11.2 Landscape and Visual Impact

11.2.1 The landscape and visual assessment did not identify any potential significant effects at either the construction or the operational phases of the development.

11.3 Noise and Vibration

11.3.1 The effects identified through the construction of the project and the operation of the plant and the overall change in noise levels, have been identified as being minor adverse. In accordance with the applied methodology, these are not deemed to be significant effects.

11.3.2 Design mitigation has been incorporated into the construction and operation of the proposals, however, on the basis that no significant effects have been identified no additional mitigation is required.

11.4 Air Quality

11.4.1 The effects identified through the construction of the project and the operation of the plant and the overall change in noise levels, have been identified as being negligible and not significant.

11.4.2 Design mitigation has been incorporated into the construction and operation of the proposals, however, on the basis that no significant effects have been identified no additional mitigation is required.

11.5 Ground Conditions

11.5.1 The likely effects of the development have been considered at both the construction and operational stage. Taking into account all design mitigation, the effects are determined to be neutral and therefore not significant.

11.5.2 Given that no significant effects have been identified no further additional mitigation is required.

11.6 Water Resources and Flood Risk

11.6.1 At the construction phase of the proposed development, adverse effects were identified in relation to the potential construction effects upon surface water quality at Nant-Y-Fendrod.

11.6.2 Other construction related effects were assessed to be neutral and non-significant. Operationally all effects have been assessed as being neutral and non-significant.

11.6.3 In order to address the likely effects, discharge consents will be required for temporary discharges to ground or surface water from the construction site under the Water Resources Act 1991. The pre-mitigation assessment has identified pollution risks as a result of particular activities and accidental or extreme events that could occur on the construction site such as large scale accidental spillages, extreme rainfall events or uncontrolled releases of cement. The proposed CEMP will specify suitable procedures and methods to protect the water environment. This will include a series of specific method statements identifying methods of working and controls to address the surface water environment impacts. The CEMP will be implemented during the construction phase. This will include as a minimum the following best practice measures:

- All relevant Environment Agency, Pollution Prevention Guidelines including as a minimum:
- Those previously mentioned which are related to legal requirements (including: PPG 2 Above ground oil storage tanks, PPG 3 Use and design of oil separators in surface water drainage systems, PPG 4 Disposal of sewage where no mains drainage is available, PPG 8 Safe Storage and Disposal of used Oils, PPG 26 Drums and intermediate bulk containers). These are not counted as additional mitigation in the residual assessment, but are re-stated here for clarity.
- General Guide to the Prevention of Water Pollution: PPG1
- Works and maintenance in or near water: PPG5
- Working at construction and demolition sites: PPG6
- The safe operation of refuelling facilities: PPG 7
- Managing fire water and major spillages: PPG18
- Dewatering of underground ducts and chambers: PPG20
- Incident Response Planning: PPG 21
- Dealing with spills: PPG 22.
- EA Regulatory Position Statement (June 2011): Managing concrete wash waters on construction sites: good practice and temporary discharges to ground or to surface waters.

11.6.4 The temporary construction drainage system and neighbouring water courses will be visually inspected on a pre agreed basis during construction to detect any problems with function and any changes in colour or turbidity, or for olfactory evidence which may indicate a temporary reduction in water quality. If on a visual inspection the drainage appears to be polluted or excessively turbid, the Environment Agency will be contacted regarding the appropriate action and the source of the pollution should be identified if possible and the spillage/containment procedure specified in the CEMP followed.

11.6.5 Taking into account the additional mitigation specified above, the intermediate adverse effect is reduced to a minor adverse effect and is therefore no longer deemed to be significant.

11.7 Ecology

11.7.1 The ecology chapter has identified a potentially significant effect at the construction phase in relation to the potential pollution affecting surface water quality which could in turn affect the watercourse (Nant y Fendrod) adjacent to the site.

11.7.2 It has been proposed that a detailed Construction Drainage Plan and contractors CEMP should be produced which provides specific methods for working following best practice standards and techniques to address all activities which have the potential to result in surface water quality pollution. It is considered

that by implementing these measures, any potential effects will be reduced a negligible and non significant level.

11.7.3 The ecology assessment did not identify any significant effects at the operational phase of the development.

11.8 Summary

11.8.1 An assessment has been undertaken for the Proposed Development in respect to the scoped areas of potential environmental concern. This has shown that if the identified additional mitigation is implemented during the construction and operational stages of the development, that all of operational and construction stage effects identified can be appropriately mitigated or compensated and reduced to a level which is not considered to be significant. Table 11.1 provides details of the additional mitigation required to mitigate any potential significant effects.

Table 11.1 Summary of Method for Securing Additional Mitigation

Identified Effect where additional mitigation (Not design mitigation) has been identified	Type of additional mitigation measures (prevent, reduce, Offset, enhance)	Means by which mitigation measure may be secured	To be delivered by	Auditable by
Water Resources and Flood Risk				
Construction				
Surface Water Quality: Nant-Y-Fendrod	**Mitigation and Reduction** Development of a Detailed Construction Drainage Plan and contractor's CEMP with specific method statements following best practice standards and techniques to address all activities that have the potential to result in surface water quality pollution, including contingency planning for extreme or accidental scenarios.	Planning Condition	**Client as part of Construction**	**Discharge of Planning Condition**
Operation				
Flood Risk within developed site	**Mitigation and Reduction** Monitor flood warnings and act on flood management plan in response to flood warnings.	Planning Condition	**Client as part of Operation**	**Discharge of Planning Condition**
Ecology				
Construction				
Surface Water Quality: Nant-Y-Fendrod	**Mitigation and Reduction** Development of a Detailed Construction Drainage Plan and contractor's CEMP with specific method statements following best practice standards and techniques to address all activities that have the potential to result in surface water quality pollution, including contingency planning for extreme or accidental scenarios.	Planning Condition	**Client as part of Construction**	**Discharge of Planning Condition**

11.9 In-combination Effects

11.9.1 In accordance with the EIA Regulations, it is also necessary to identify the in-combination effects (also known as inter-relationship) arising from the Proposed Development. These are the effects which in isolation may only represent a slight effect upon a receptor, but in conjunction with the other effects arising from the topic assessments, may represent a greater effect and need to be given further consideration. For example, a local resident might be affected by the noise from the construction phase, but might also be affected by dust and increased traffic. Individually, these might not be assessed as being significant, but in combination they might become significant.

11.9.2 This form of cumulative assessment is based upon the residual effects as it has been assumed that the additional mitigation detailed above will be implemented, as it can be readily secured through the planning system.

11.9.3 Only those effects which have been determined to be minor/slight or above have been considered to represent an effect on identified receptors and are therefore represented in the in-combination effects table.

11.9.4 The in-combination effects assessment identifies a number of in-combination effects on a single receptor or group of receptors, as is the case for local residents and landscape features. However, the in combination effects are not considered to be magnitudinally greater than those effects identified by individual topic chapters and as such no additional mitigation or compensation is required.

Table 11.2 In-Combination Effects during Construction

Nature of Effect (Post Additional Mitigation)	Local Residents	Wider Community	Landscape Features and Designations (e.g. local footpaths, woodland)	Surface water	Heritage features (above ground e.g. listed buildings, conservation areas,)	Heritage features (below ground)	Ecological Receptors (Hedgerows, trees , badger and bat)
Noise Construction Noise	Minor Adverse	Minor adverse	-	-	-	-	-
Water Surface water quality	-	-	-	Minor Adverse	-	-	Minor adverse
Landscape Landscape features – site boundary vegetation	-	-	Moderate Adverse	-	-	-	-
Landscape Setting to settlement	Minor adverse	-	-	-	-	-	-
Landscape Designated landscapes (Swansea Vale SINC and Llansamlet conservation area)	-	-	Minor adverse	-	-	-	-
Landscape Listed buildings	-	-	-	-	Minor Adverse	-	-

Table 11.3 In-Combination Effects during Operation

Nature of Effect (Post Additional Mitigation)	Local Residents	Wider Community	Landscape Features and Designations (e.g. local footpaths, woodland)	Heritage features (above ground e.g. listed buildings, conservation areas)	Heritage features (below ground)	Ecological Receptors (Hedgerows, trees , badger and bat)
Noise Noise from plant associated with energy recovery facility	Minor adverse	-	-	-	-	-
Noise Overall changes in noise levels	Minor adverse	-	-	-	-	-
Landscape Designated landscapes (Swansea Vale SINC and Llansamlet conservation area)	-	-	Minor Adverse	-	-	-

Nature of Effect (Post Additional Mitigation)	Local Residents	Wider Community	Landscape Features and Designations (e.g. local footpaths, woodland)	Heritage features (above ground e.g. listed buildings, conservation areas)	Heritage features (below ground)	Ecological Receptors (Hedgerows, trees , badger and bat)
Landscape Listed buildings	-	-	-	Minor Adverse	-	-