The Planning Inspectorate
Yr Arolygiaeth Gynllunio

# Adroddiad

**gan Clive Nield BSc(Hon), CEng, MICE, MCIWEM, C.WEM**

**Arolygydd a benodir gan Weinidogion Cymru**

**Dyddiad: 05.12.2017**

# Report

**by Clive Nield BSc(Hon), CEng, MICE, MCIWEM, C.WEM**

**an Inspector appointed by the Welsh Ministers**

**Date: 05.12.2017**

**TOWN AND COUNTRY PLANNING ACT 1990**

**SECTION 62D**

**The Developments of National Significance (Wales) Regulations 2016**

**Application by Egnedol Wales Limited**

**Land formerly occupied by the Royal Navy Armament Depot (RNAD) and the Gulf Oil Refinery at Blackbridge and Waterston, near Milford Haven, Pembrokeshire**

Cyf ffeil/File ref: APP/N6845/A/16/3146073

**CONTENTS**

**Abbreviations used in this report:**

| | |
|---|---|
| AA | Appropriate Assessment |
| BtEf | Biomass to Energy facility |
| COMAH | Control of Major Accident Hazards Regulations |
| DNS | Development of National Significance |
| EIA | Environmental Impact Assessment |
| ES | Environmental Statement |
| EPS | European Protected Species |
| GHS | Greater Horseshoe (Bat) |
| HRA | Habitats Regulations Assessment |
| HLCA | Historic Landscape Character Area |
| LDP | Local Development Plan |
| LHS | Lesser Horseshoe (Bat) |
| LIR | Local Impact Report |
| LVIA | Landscape and Visual Impact Assessment |
| NP | National Park |
| NRW | Natural Resources Wales |
| PCC | Pembrokeshire County Council |
| PPW | Planning Policy Wales |
| RNAD | Royal Navy Armaments Depot |
| SAC | Special Area of Conservation |
| SPA | Special Protection Area |
| SPG | Supplementary Planning Guidance |
| SSSI | Site of Special Scientific Interest |
| TAN | Technical Advice Note |
| 'The 1990 Act' | The Town and Country Planning Act 1990 (as amended) |
| 'The 2015 Act' | The Planning (Wales) Act 2015 |
| 'The DNS Regulations' | The Developments of National Significance (Wales) Regulations 2016 |
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|---|---|
| 'The EIA Regulations' | The Town and Country Planning (Environmental Impact Assessment) (Wales) Regulations 2016 |
| 'The Habitats Regulations' | The Conservation of Habitats and Species Regulations 2010 |
| 'The Procedure Order' | The Developments of National Significance (Procedure) (Wales) Order 2016 |
| 'The Secondary Consents Regulations' | The Developments of National Significance (Specified Criteria and Secondary Consents (Wales) Regulations 2016 |
| UDP | Unitary Development Plan |
| WBFG Act | The Well-Being of Future Generations (Wales) Act 2015 |
| WG | Welsh Government |

**DNS Application Ref: APP/N68455/A/16/3146073**

**Site address: Land formerly occupied by the Royal Navy Armament Depot (RNAD) and the Gulf Oil Refinery at Blackbridge and Waterston, near Milford Haven, Pembrokeshire**

- The application, dated 8 November 2016, was made under section 62D of the Town and Country Planning Act 1990 (as amended by the Planning (Wales) Act 2015).
- The application is made by Egnedol Wales Limited.
- The application was confirmed as valid on 22 December 2016.
- Site visits were carried out on 24 January 2017 (accompanied) and 28 March 2017 (unaccompanied), a public open forum was held on 28 March 2017, and Hearings were held on 29 and 30 March 2017.
- The development proposed is the construction of a 49.9 MW Biomass to Energy facility (BtEf), a facility for the advanced conversion of carbon to liquid fuel and gas, and (in 2 Eco Parks) an aquaculture facility to include a fish farm and a prawn farm, algae production units, a cheese production unit, greenhouses, a facility for the preparation and sale of farm produce, research and development facilities, and a new grid connection.

**Secondary Consent Applications**

- The secondary applications were made under section 62F of the Town and Country Planning Act 1990 (as amended by the Planning (Wales) Act 2015).
- The developments proposed are the 2 Eco Parks as detailed above.

**Summary of Recommendation:** The applications be refused.

## Procedural Matters

1. The DNS application was first submitted in July 2016, accompanied by an Environmental Statement of that date (Documents A4, A5 & A6 and Plans A1-A59). However, the Environmental Statement was assessed as incomplete and the application was not accepted. The current application is a resubmission supported by an improved Environmental Statement (Documents B1, B2 & B4 and replacement/additional plans B1-B3, B37 & B60). The various supporting reports submitted with the first application are taken to be applicable to the current application with the exception of the Bat Survey Report, which was updated and resubmitted as Revision C dated November 2016 (replacing the previous version contained in Document A6.9, i.e. Appendix 3.9 of the first ES). The covering letter for the current application (dated 8 November 2016) also listed 4 replacement drawings and one new drawing (Plans B1-B3, B37 & B60 respectively), the latter addressing an omission identified in the original Environmental Statement. All of the other drawings submitted as part of the first application are taken to be applicable to the current application.

2. In accordance with the requirements of The Developments of National Significance (Procedure) (Wales) Order 2016, the proposed application was subject to appropriate pre-application consultation and publicity ending on 11 May 2016, and the first application was accompanied by a Pre-Application Consultation Report, dated June 2016 (Document A8). The current (2nd) application was also accompanied by a Pre-Application Consultation Report dated June 2016 (Document B5), which contained a minor modification. Consequently, I have edited the date to read November 2016.

3. On confirmation of the validity of the application (22 December 2016), PINS undertook the specified consultation and publicity measures as required by the Order, setting a period of 6 weeks rather than 5 weeks for responses to allow for the Christmas period. 28 letters of objection (including a petition in the form of some 58 standard letters), 6 letters of support (including a petition in the form of 5 standard letters), and 8 other representations were received by the 2 February 2017 deadline (see folder, Document C1). Pembrokeshire County Council also submitted its Local Impact Report by the same date (Document C2).

4. Based on the Application Documents, the Pre-Application Report, the consultation responses and the Local Impact Report, I identified the need for two topic-specific hearings: one on Protected Species and Special Areas of Conservation, covering effects on bats, otters and other species, and the need for Habitats Regulations Assessments; and one on Safety and Amenity Matters and Conditions, covering traffic and highway safety, visual and landscape impacts, contaminated land, and conditions. Further written information was also requested from the Applicant on several other matters, and the Council was asked for further information on possible conditions. In addition, in response to requests from a number of local residents for an opportunity to express their views orally, an evening public open forum was held.

5. The overall scheme also includes the refurbishment of the jetty for use in transporting the biomass material to the site and the laying of a connection beneath the Haven to connect to the national grid at Pembroke Power Station. These require a Marine Works Licence for which application is to be made to Natural Resources Wales separately. Nevertheless, although not part of the current application, they are included in the overall scheme so far as the Environmental Statement is concerned.

6. The Application for a Development of National Significance is made in respect of the Biomass to Energy facility, and approval for the associated Eco Park developments is sought by means of Secondary Consents under section 62F of the Act (as amended). The former comprises all components of the Biomass to Energy facility, as illustrated on Drawing EGW-01-003 Rev C (Plan B3), as well as the new and improved access into the site (see Drawing EGW-01-001 Rev D – Plan D1). The Blackbridge and Waterston Eco Parks comprise a number of commercial units, as illustrated on Drawings EGW-01-002 Rev C and EGW-01-004 respectively (Plans B2 & A4). Drawing EGW-01-001 Rev D (Plan D1) is the latest Master Plan of the scheme as a whole.

7. I have structured the documents and plans lists as follows:

   - Prefix A – Documents and plans submitted for the first application;
   - Prefix B – Replacement and additional documents and plans submitted for the second (current) application;
   - Prefix C – Documents and plans submitted after the application was accepted as valid, including consultation responses, the Local Impact Report, responses to PINS' requests for further information, and documents for the hearings.
   - Prefix D – Documents and plans submitted following the 6 months suspension of the DNS timetable.

8. During the first hearing, on Protected Species and Special Areas of Conservation, it was clear that Natural Resources Wales and Pembrokeshire County Council were still

strongly of the view that the Environmental Statement was inadequate in respect of effects on several protected species and habitats, that proposed mitigation measures were considered to be inadequate to compensate for any harm caused, and that further work was required in relation to the associated Habitats Regulations Assessments. After some discussion, the Applicant indicated that it would be happy to accept a suspension of the DNS timetable to enable this additional environmental information to be collected, assessed and presented. It was hoped that thorough consultation with NRW and PCC on both the scope of the additional work needed and on the results and interpretation of the information collected would enable a measure of agreement to be achieved.

9. PINS subsequently wrote to the main parties on 4 April 2017 confirming that the examination was being suspended for 6 months up to 30 September 2017 and specifying the timetable for the proposed additional work and liaison, culminating in the submission of supplementary environmental information and information for Habitats Regulations Assessment.

10. The scope for the further work needed and the additional matters to be considered by Egnedol were agreed amongst the main parties later in April 2017 (Document D1). After some 4 months Egnedol submitted a substantial amount of additional environmental information (Documents D3-D17). PINS consulted with NRW and PCC on this and received their comments on 8 September 2017 (Documents D19 and D20). Letters were also sent out to all other interested third parties inviting comments on the additional information (Document folder D18, dated 28 July 2017). Three local residents submitted comments (Documents D21.1-D21.3).

11. Egnedol were then given an opportunity to respond to these comments, and on 29 September 2017 they submitted a detailed response addressing each matter raised by NRW and PCC (Document D22). In view of the detailed nature of this response, PINS sought final comments from NRW and PCC, which were received on 18 and 20 October 2017 (Documents D24.1, D24.2 and D25). Comments were also sought from the main parties on the draft ecological conditions previously suggested by the Council (Document C4, dated 8 March 2017), as these had not been discussed at the hearing on ecological matters due to the decision to suspend the examination timetable while further work was carried out. Egnedol and NRW submitted their comments on 13 and 20 October 2017 (Documents D23 and D25).

12. On the basis of the additional information submitted and the series of subsequent comments on that, there was no need for a further hearing.

**Site and Surroundings**

13. The site is in 2 parts: the Blackbridge site; and the Waterston site. The Blackbridge site was formerly a Royal Navy Armaments Depot (RNAD) and lies on the banks of the Milford Haven waterway and to the east of the town of Milford Haven, separated from it by the Castle Pill (see aerial photograph – Document B3). Most of the site is previously developed land, essentially a low-lying plateau some 7 m AOD, which contains a number of derelict buildings, structures and areas of hard-standing (see photograph on page 3 of the ES (Document B1)). This part of the site is served by a disused jetty, which is in need of refurbishment. It is proposed to build the Biomass to Energy facility on this part of the site.

14. The Blackbridge Eco Park would occupy higher land on the largely undeveloped hillside above the former RNAD site. Part of this area is rough scrub land and part is agricultural land used for grazing. The Blackbridge site would be served by a new access linked to an existing access road alongside the former oil refinery to the east. This access road is off the B4325 highway between Waterston and Blackbridge, on the outskirts of Milford Haven.

15. The Waterston Eco Park would be constructed mainly on land that was formerly part of the Gulf Oil Refinery. Again, this is previously developed land largely covered by hard-standing and refinery roads. It lies at a level some 50 m AOD and would be served by an access off Hazelbeach Road on the edge of the village of Waterston. The Waterston Eco Park would also extend on to land on the opposite (north-eastern) side of Hazelbeach Road, which is currently a car park and playing field on the edge of the village, and on to an agricultural field on the north-eastern edge of the village (see Plan D1).

16. Whilst the oil refinery and the derelict former RNAD complex dominate the area immediately to the north of the Milford Haven waterway, beyond these and the village of Waterston the land in this area is predominantly undulating agricultural land. On the opposite side of the Haven the main features are the Pembroke Power Station and a large oil storage depot (see aerial photograph - Document B3).

17. Although it is a relatively busy waterway for shipping, the Milford Haven is a designated Marine Special Area of Conservation (SAC) and a Site of Special Scientific Interest (SSSI). The site is also within the Milford Haven Waterway Landscape of Outstanding Historic Interest (published by CADW). The Pembrokeshire Coastal Path generally follows the northern and southern coastlines of the Haven. However, in the proximity of the site it runs north along the western side of Castle Pill, then east over the road bridge and along the B4325 before dropping south past Venn Farm, across the route of the proposed new access road and on to the edge of the Haven. The Coastal Path route is illustrated on a map at Appendix 6 of the Council's Local Impact Report (Document C2).

**Proposed Development** (Documents B1 & A3)

18. The 49.9 MW energy plant would use a combination of virgin biomass and biomass recovered from waste streams to generate electricity, which would be exported to the National Grid by means of a cable under the Haven (through a directionally drilled borehole) to a connection point at the Pembroke Power Station. The feedstock would be delivered to the site on ships and barges via the refurbished jetty, having been pre-prepared off-site to pellets of maximum size 20 mm and 20% moisture content. Virgin biomass would be sourced from locations that comply with European and UK sustainability criteria, and a satellite feedstock preparation facility would be proposed at Pembroke Dock for local feedstock supplies (not included in this application).

19. Drawing EGW-01-003 Rev C (Plan B3) shows the proposed layout of the BtEf scheme and its various components. The site is already occupied by a number of large derelict buildings, and these would be retained, extended and refurbished for reuse (shown coloured pink on the plan). Additional buildings and structures would also be needed to house the equipment and store the feedstock (shown coloured green on the plan), including a 60 metres tall flue stack. The jetty would need to be refurbished with new

bracing and a new deck. However, as this is situated below the mean low water mark it falls outside the scope of the 1990 Act and is not included in the current application.

20. The biomass pellets would be unloaded at the jetty and transferred to a large storage building by means of an enclosed conveyor. The BtEf (pyrolysis) process would then convert the biomass into gas that would in turn be used to generate electricity in gas engines for supply to the National Grid. Some liquid fuel and methane-type gas would also be produced for use on or off site.

21. The DNS application also includes the proposed new access road, which would be constructed partly by improving an existing track and partly on a new route through an area of woodland and fields near the reservoir (see the Master Plan - Plan D1) to connect to an existing access road alongside the former oil refinery to the east.

22. The Blackbridge Eco Park would comprise 2 large greenhouses (for horticultural use) and 4 algae production units on elevated land above and to the north of the energy plant, as illustrated on Drawing EGW-01-002 Rev C (Plan B2). These units would benefit from low-grade waste heat and carbon dioxide generated in the energy generation process, which would reduce their environmental footprint and production costs. The algae facilities would be operated in conjunction with specialists from industry and local universities to produce algae for foods, pharmaceutical products and aquaculture feedstocks.

23. The Waterston Eco Park would mainly comprise a Recirculating Aquaculture System, with 5 aquaculture buildings producing organic prawns and fish, an associated heat exchange and stock storage building, and 12 greenhouses containing algae beds for cleaning and treatment of the recirculating water. In addition, to the north of Hazelbeach Road a cheese production unit and a packaging facility are proposed, as well as a construction and operational car park for employees on both the Blackbridge and Waterston sites. Like the Blackbridge Eco Park, the units on the Waterston site would also benefit from low-grade waste heat and carbon dioxide generated in the energy generation process. The proposed layout for the Waterston site is illustrated on Drawing EGW-01-004 (Plan A4).

24. The scheme as a whole is illustrated on the very large Master Plan drawing, EGW-01-001 Rev D (Plan D1).

**Planning Policy** (Documents B1 and C2)

25. The adopted development plan is the Pembrokeshire County Council Local Development Plan (LDP), adopted in February 2013, which is reproduced in Appendix 1 of the Council's Local Impact Report (LIR) (Document C2). The vision and objectives of the LDP are presented in Chapter 4, and Chapter 5 presents the Plan Strategy which includes 16 strategic policies designed to deliver the vision and objectives of the Plan for sustainable development. A number of these strategic policies are particularly relevant:

    - SP 1 (Sustainable Development) which requires all development to demonstrate positive economic, social and environmental impacts and minimisation of adverse impacts;

    - SP 2 (Port and Energy Related Development) which supports development in defined areas, including most of the application site;

- SP 3 (Employment Land Requirements) which allocates strategic employment land for Classes B1, B2, B8 and other appropriate employment uses.

26. Other relevant strategic policies include: SP 10 (Transport Infrastructure and Accessibility); SP 11 (Waste); SP 13 (Settlement Boundaries); SP 14 (Hub Towns); SP 15 (Rural Settlements); and SP 16 (The Countryside).

27. Chapter 6 of the LDP sets out detailed policies, the most relevant of which are:

- GN.1 (General Development Policy) which provides a criteria-based framework for evaluating impacts;
- GN.2 (Sustainable Design) which again provides a criteria-based framework;
- GN.4 (Resource Efficiency and Renewable and Low-carbon Energy Proposals) which supports renewable energy schemes supplied through environmentally acceptable solutions;
- GN.6 (Employment Proposals) and GN.7 (Extensions to Employment Sites) which cover proposals on unallocated land;
- GN.37 (Protection and Enhancement of Biodiversity) which requires a positive approach towards maintaining diversity and only allows development that harms protected species or their habitats in exceptional circumstances.

28. The following adopted Supplementary Planning Guidance documents are also relevant:

- Development Sites SPG, which includes reference to the Blackbridge site and existing employment sites;
- Renewable Energy SPG, which provides guidance on the assessment of the environmental effects of biomass proposals;
- Biodiversity SPG, which provides guidance on securing sustainable development that protects and enhances biodiversity.

29. At a national level, the creation of a low carbon, sustainable economy is the key aim in the Welsh Government's Energy Policy Statement - A Low Carbon Revolution (2010) and its follow-up strategy document, Energy Wales – A Low Carbon Transition (2012). These encourage the use of indigenous renewable fuels and describe the potential economic benefits for Wales. These principles are now enshrined in the Welsh Government's main policy documents, Planning Policy Wales and its supporting Technical Advice Notes.

**Environmental Impact Assessment and Habitats Regulations Assessment (the Applicant's Case)**

30. The Applicant has carried out an Environmental Impact Assessment and submitted an Environmental Statement (Documents B1, B2, B4 & A6). A Habitats Regulations Assessment report was also submitted (Document A7). The material points are summarised below (supplemented in some respects by further environmental information provided during the course of the examination, including that submitted following the period of suspension). The latter included a Planning Hearing Addendum Report (Document D3), a Marine Environmental Impact Assessment (Document D13), a Shadow Habitats Regulations Assessment for the Marine Sites and an updated

general Habitats Regulations Assessment (Documents D14 and D15), an Ecological Management Plan (Document D16) and a Shadow EPS Licence Application (Document D8).

***Rationale and Benefits*** (Document B1)

31. The acknowledged situation on climate change has led the UK and Welsh Governments to adopt challenging objectives for renewable energy and reductions in carbon emissions. The Welsh Assembly Government Energy Policy Statement of 2010 defined 3 main aims: to maximise energy savings and efficiency; to move to resilient low-carbon energy production; and to maximise the economic renewal opportunities of the transition to low-carbon energy.

32. A large proportion of the UK's current electricity generating capacity is expected to close over the next decade, and new generating capacity needs to be created to replace it. The British Government's Energy White Paper of 2007 confirmed a commitment to further development of nuclear energy. However, in view of uncertainties over nuclear waste disposal and the safety of the industry, the long-term future of nuclear energy remains in question.

33. There are a number of other alternative low-carbon energy sources available: wind; solar; wave and tidal; hydroelectric; and waste incineration. However, energy from biomass feedstocks is becoming an increasingly important source of renewable low-carbon fuel. It may even be described as carbon neutral, as the amount of carbon dioxide liberated during combustion is broadly equivalent to the amount assimilated during crop growth. The proposed project would use approximately 480,000 tonnes of biomass per annum to generate liquid fuels and gas and an energy output of some 49.9 MW using the gasification process.

34. The gasification process allows environmental emissions to be controlled by cleaning the synthetic gas generated to a high standard and then treating the combustion emissions using selective catalytic reduction and an oxidation catalyst. The treated exhaust gas can then be used for heat and carbon dioxide recovery prior to emission via the exhaust stack. Gasification is more environmentally efficient than incineration and produces almost twice as much electricity as incineration per tonne of carbon dioxide emitted.

35. It is anticipated that the virgin biomass feedstock would be derived from several sources: sustainably managed overseas plantations operated by Egnedol; local supplies of forestry brash and private woodlands; and other non-UK sustainable supplies. These would comply with the Department of Energy and Climate Change criteria for sustainability. The plant would also be able to utilise the biomass fraction of waste derived fuel (WDF) available both locally and elsewhere in the UK.

36. Three other possible sites for the scheme were investigated in Wales and one in Scotland. The main reasons the Blackbridge site is considered suitable are: its availability and location within an Enterprise Zone supporting energy related developments; the size of the site allows space for the associated downstream uses; the availability of the jetty in one of the best natural deep water harbours in Europe; the connectivity to nearby gas mains and to the National Grid at Pembroke Power Station; and the local skilled labour force with a history of developed skills in power generation and aquaculture.

37. The scheme is supported by both national and local development plan policy for sustainable energy production and would make an important contribution towards the Welsh Government's aims for sustainable, low-carbon renewable energy generation.

***Ecology*** (Document B1)

38. The Blackbridge application site is known to be frequented by bats, otters and badgers and lies alongside the Haven, which is a designated Special Area of Conservation with important species and features. Studies have been carried out to assess the potential impact of the proposed development on each of these. Consideration has also been given to potential impacts on several other designated European sites (Special Areas of Conservation and Special Protection Areas) further afield. Based on the findings, appropriate mitigation measures are proposed as part of the development.

39. A Phase 1 habitat survey of the Waterston site has been carried out, followed by further surveys for otters, barn owls, badgers and invertebrates. The area is of low ecological value, and the remainder of this section refers to the Blackbridge site.

BATS (Documents B1, B4, D3-D8 and D22)

40. The Blackbridge site has been extensively surveyed for bats, particularly during 2015, 2016 and 2017, and signs of at least 6 species have been found roosting within the structures on the site: greater horseshoe, lesser horseshoe, common pipistrelle, soprano pipistrelle, brown long-eared and a *Myotis* species. The roost types include day roosts, hibernation, mating roosts and a maternity site for lesser horseshoe bats, and summer day roosts, mating and hibernation roosts for greater horseshoe bats. Many of the smaller roosts throughout the complex of buildings and tunnels are used on a seasonal basis.

41. The surveys were carried out in accordance with "Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd Edition, 2016)", and the numbers and durations of surveys met or exceeded the Bat Conservation Trust Guidelines. A variety of surveys were carried out, including: dawn and dusk emergence and re-entry surveys; transect surveys; static detector surveys; hibernation and summer internal inspection surveys; and swarming surveys.

42. Significant bat roost activity was identified in the derelict buildings, the tunnels and the blast wall arch. Some mature trees on the site also have potential for bat roosts. In addition, the hedgerows and scrub on the site were found to provide links between roosts and foraging areas. The conclusion of the surveys is that the site supports a significant bat population, particularly Greater and Lesser Horseshoe bats.

43. Furthermore, the bat populations at Blackbridge are likely to be linked to those in a wider area. For example, the known hibernation summer roost site at Scoveston Fort is less than 2.5 km away, well within the core sustenance zone for some bats. The site is also within range for wintering Greater and Lesser Horseshoe bats from the Pembrokeshire protected bat sites: Stackpole National Nature Reserve (9.5 km); Newgale to Little Haven Coast SSSI (9.5 km); Angle Peninsula Coast SSSI (6.5 km); Castlemartin Range SSSI (6.7 km); Orielton Stable Block and Cellars (7 km), Stackpole Courtyard Flats and Walled Garden (9.5 km); Limestone Coast of South West Wales (4.5 km); and Bosherston Bat Sites and Bosherston Lakes (7 km). These sites are all designated for Greater and Lesser Horseshoe bats and include hibernation and summer roost sites.

44. In the absence of mitigation, the proposed works would have a high impact on individual bats and a regional-level impact on the Greater and Lesser Horseshoe bat populations. The proposed works to the buildings on site would present a risk of death or injury to individual bats, including bats of Annex II species, and are assessed as having a high negative impact on roosts in some buildings of moderate conservation significance. In addition, if unmitigated, the initial development work would pose a significant disturbance/destruction risk to roosts identified in most of the tunnels and the blast wall arch.

45. As to long-term operational impacts, the use of the currently derelict buildings would result in the loss of various roosts and is generally assessed as being a moderate negative impact. In addition, without mitigation, long-term operations would have the potential to affect roosts in many of the tunnels and the blast wall arch. Together with loss of habitat and any increase in lighting of the site, this may cause roosts to be abandoned, which would have a significant negative effect on the bat species affected. Construction of the proposed new access road could also pose a significant fragmentation risk due to loss of or disturbance of foraging and commuting habitat, particularly in the area of woodland.

46. To alleviate these risks detailed proposals for mitigation and compensation measures would be proposed. These would include: the timing of works; retention of roosts; lighting design; measures to control noise and other disturbances; the creation of new roosts; and landscape enhancements. Successful implementation of these measures would ensure that the conservation status of the local greater and lesser horseshoe and other bat species populations would be maintained at a favourable or even enhanced state.

47. As the development would affect bats and their roosts a European Protected Species Licence (EPS licence) would be required, and a Shadow EPS Licence Application document has been prepared to indicate the nature of the application that would be made to Natural Resources Wales (NRW) in due course (Document D8). That document includes a detailed method statement specifying the conservation value of the site and a detailed mitigation and compensation plan to retain or enhance the conservation value of the site.

48. These mitigation and compensation measures would be secured by the provision of planning conditions and via the EPS licence requirements. Proposals may be more specifically described:

    - Timing of works: outside the main hibernation and maternity periods for bats;

    - Tunnel roosts: access doors to be repaired/enhanced with baffles in the tunnels and surrounding vegetation safeguarded;

    - Bat tubes on Buildings A and B and the proposed new storage building to replicate conditions for crevice-dwelling hibernating roosts;

    - Bat houses: 3 new bat houses for use by both hibernating and maternity colonies;

    - New planting: hedgerows to maintain existing east/west commuter routes and provide additional foraging habitat, and trees and scrub to screen woodland edge and tunnel entrances;

- Lighting designed to create dark corridors and minimise light spill;
- An Ecological Management Plan (see Document D16) for all of the retained and created wildlife habitats, and a monitoring programme to assess the success of the various measures.

49. In March 2017 the hearing into ecological matters identified the need for improved environmental information on a number of matters, one of which was bats. The scope of the further work required was agreed with specialist representatives of NRW and Pembrokeshire County Council (PCC), and the work was carried out to that specification. The results have been presented as an Addendum Report (Document D3) supported by several additional documents, including bat survey reports (Documents D4, D5 and D6), an Exterior Lighting Assessment report (Document D7) and a shadow EPS Licence Application (Document D8). NRW and PCC subsequently provided detailed comments and queries on this additional information (Documents D19 and D20), and Egnedol has responded by addressing each of the matters raised (Document D22).

50. It is concluded that, following implementation of the proposed mitigation measures, the scheme would have no likely significant effects or residual environmental impact.

OTTERS (Documents B1, D3, and D9-D11)

51. The otter is also a European Protected Species and is protected under the Habitats Regulations. Surveys in 2010 identified that otters use the reservoirs and woodland area on the eastern side of the Blackbridge site and an access route along the stream and open culvert. Some activity was also identified at the western end of the site near Castle Pill. Although there was no evidence of past breeding, 3 holt sites with potential for breeding use were found around the edges of the reservoirs.

52. More substantial surveys in 2015 and 2016 showed that otters were active on the stream and reservoirs throughout the year and that they use the foreshore area for feeding and travel, particularly in the spring season. Further survey work was carried out in 2017 to assess the potential effects of the proposed new access road.

53. It is concluded that, without mitigation measures, the proposed development would be likely to have a significant effect on otter travel between the stream and reservoirs and the foreshore due to disturbance associated with operational activities and nearby buildings. However, appropriate mitigation measures could be applied to minimise this and to ensure travel between these features would continue.

54. The measures would include:

- A new length of culvert designed to provide an easy and safe passage through the main area of development;
- Nearby buildings designed to minimise disturbance by avoiding doors and windows towards the otter route and by avoiding lighting on that side;
- Wide buffer zone and solid screen fencing between the stream and the new access road;
- Timing of construction work on the jetty and nearby buildings to avoid periods of otter activity; and

- Long-term protection for habitats associated with the stream and reservoirs.

55. The mitigation measures would ensure that the proposed development would not adversely affect the use of the site by otters.

BADGERS (Documents B1, D3 and D12)

56. Badgers are known to frequent the woodland on and adjacent to the Blackbridge site, and several surveys have been carried out to assess the extent of that use. These have generally identified 3 main setts in the wooded areas of the site (see Figure 10.8 of the Environmental Statement – Document B1), though the latest 2017 survey considered there to be only 2 main setts (see Figure 1 of the June 2017 Survey Report – Document D12). Key movement tracks and foraging areas have also been identified.

57. The proposed development would not allow all existing habitats to be retained, including the multi-hole main sett in the area where the algae bioreactor units are proposed. Thus, before construction work was started, badgers would have to be excluded from that sett, which would be demolished, and a new artificial sett would be constructed as a compensation measure. Badgers and their setts are protected under the Protection of Badgers Act 1992, and an application would have to be made to NRW for a licence to carry out that work to the sett.

58. The indications of the 2017 survey are that there is just one badger family using the range of setts in this area. As well as a new artificial sett, mitigation and compensation measures would include the maintenance and improvement of existing access routes through the site (for links to foraging areas such as the stream and reservoir valley and woodlands) and the provision of new foraging areas to replace those lost.

59. Taking these measures into consideration, the proposed development would not affect the survival of the resident badger social group.

MARINE (Documents B1, D3, D13 and D22)

60. Some survey work of the marine environment was carried out prior to making the application but further work was carried out during the 6 months suspension period (see Marine Environmental Impact report – Document D13, including D13 Annex). During the construction period the marine environment would be affected by work on the jetty and the construction of new mooring dolphins (isolated structures for the mooring of vessels) and by the use of barges to bring in large construction equipment and materials. A "worst case" scenario has been taken into account by assuming some of the jetty piles would need to be replaced, involving both sea bed disturbance and noise. During long-term operations the biomass delivery vessels would have potential to cause disturbance.

61. The May 2017 survey involved visual inspection of the sea bed using a towed camera array (see Document D13 Annex), and it provided clear evidence that the habitats in the jetty and barge landing areas are simple mud flats which are exposed at low tide. The dolphin locations are also characterised by mud flats but would remain under water at low tides. No protected or notable flora or fauna were identified, and the construction work and vessel docking activities would have negligible impact on this habitat type, which is not priority habitat so far as designation of the Pembrokeshire Marine SAC is concerned. Standard precautions for such activities would provide adequate protection and mitigation to safeguard the immediate marine ecology.

62. NRW has claimed that the seabed video survey was not fit for purpose but has not fully explained why. The methodology was agreed with NRW in advance, and it is considered that the results are sufficient to allow the biotopes (habitats comprising a specific assemblage of plants and animals) present to be characterised and used to inform the assessments.

63. The Pembrokeshire Marine SAC is designated for the presence of 8 marine habitat types and 7 Annex II species (i.e. Annex II of the Habitats Regulations, denoting species whose conservation requires the designation of SACs). Of these, "mud flats and sand flats not covered by seawater at low tide" is the only immediate habitat whilst, with the exception of Otters, the Annex II species (Grey Seal, Allis Shad, Twaite Shad, River Lamprey, Sea Lamprey and Shore Dock) are only occasionally seen.

64. Construction activities are assessed as likely to have no significant effect on any of these features due to the short-term nature of the work, controls over noise generation to ensure no harmful effects, and general construction methodology controls. Any piling needed would be carried out outside high tide periods, and noise would quickly be attenuated within a few hundred metres. NRW have continued to criticise the noise assessment and appear to not understand the overall modelling, assessment and mitigation measures.

65. Furthermore, the area affected would be very small in comparison with the large extent of the Haven. During long-term operations the additional vessel movements generated by the import of biomass would be small in comparison with the existing day to day traffic in the Haven, and any increase in risks to marine species would be negligible.

66. Finally, 11 different marine birds have been recorded in the Haven within 2 km of the site. However, the construction and operation of the proposed development would have no significant effect on them due to the large extent of the estuary and other supporting habitat.

HABITATS REGULATIONS ASSESSMENT (Documents B1, D3, D14, D15 and D22)

67. Regulation 61 of the Habitats Regulations requires the Competent Authority, before deciding to give consent for a plan or project which is likely to have a significant effect on a European Site (either alone or in combination with other plans or projects), and which is not directly connected with or necessary to the management of that site, to make an "appropriate assessment" of the implications for that site in view of its conservation objectives. Four stages are defined for the assessment process, though Stages 3 (Assessment of Alternatives) and 4 (Assessment of Imperative Reasons of Overriding Public Interest) are only required if the plan or project fails on Stages 1 and 2 (Screening and Appropriate Assessment).

68. To enable the Welsh Ministers to be able to carry out the appropriate assessment process, evidence has been provided in 2 shadow HRA documents: Document D15, titled Habitats Regulations Assessment; and Document D14, titled Shadow Habitats Regulations Assessment (sHRA), Marine Sites. The key elements of these are summarised in this section.

69. There are 6 SACs and 3 SPAs within 15 km of the application site:

    - Limestone Coast of South West Wales SAC;

- Pembrokeshire Bat Sites and Bosherston Lakes SAC;
- Pembrokeshire Marine SAC;
- Cleddau River SAC;
- Yerbeston Tops SAC;
- West Wales Marine cSAC;
- Castlemartin Coast SPA;
- Skokholm and Skomer SPA;
- Skomer, Skokholm and the Seas off Pembrokeshire pSPA.

70. The Limestone Coast of South West Wales SAC covers almost 1600 hectares and is designated on account of two Annex I qualifying habitats (vegetated sea cliffs and fixed coastal dunes with herbaceous vegetation) and two Annex II species (Greater Horseshoe bat and Early Gentian, a small flowering plant). Some of the features have favourable conservation status but some are considered to be in decline. Of these, the Greater Horseshoe bat is relevant and its conservation status is considered to be favourable.

71. The Pembrokeshire Bat Sites and Bosherston Lakes SAC is much smaller (122 hectares) and is designated on account of the Bosherston Lakes, an Annex I habitat created some 200 years ago by damming a limestone valley, and an Annex II species, the Greater Horseshoe bat. Whilst the conservation status of the former is assessed as unfavourable and declining, that of the Greater Horseshoe bat is favourable. The Lesser Horseshoe bat and the Otter are also present but are not primary reasons for the site's designation. The Lesser Horseshoe bat is assessed as having favourable conservation status, whilst the Otter has unfavourable status and is in decline.

72. The Pembrokeshire Marine SAC covers an expansive area (almost 140,000 hectares) and is designated on account of 3 Annex I qualifying habitats (estuaries, large shallow inlets or bays, and rocky reefs) and two Annex II species (the Grey Seal and the Shore Dock, a rare and endangered plant). Other Annex I habitats are also present but are not a primary reason for designation: permanently submerged; mudflats and sandflats not covered by seawater at low tide; coastal lagoons, Atlantic salt meadows and submerged or partially submerged sea caves. Other Annex II species that are qualifying features but not primary reasons for designation include: Sea Lamprey; River Lamprey; Allis Shad; Twaite Shad; and Otter. Whilst the lagoon and cave features are at favourable conservation status, the other habitat features are reported to be at unfavourable status. Of the species, the Lamprey are at unfavourable status and the Grey Seal at favourable. The others have not been assessed.

73. The Cleddau River SAC is some 750 hectares in size and comprises land designated as 6 SSSIs. The ecological status of the Cleddau River is a major determinant of favourable conservation status, and all of the habitat features are in unfavourable status, as are the 4 fish species featured: Sea Lamprey, Brook Lamprey, River Lamprey and Bullhead. The Conservation status of Otter is assessed as favourable.

74. The Yerbeston Tops SAC is quite small (less than 20 hectares) and is made up of woodland, grassland and bog/marshes. The Marsh Fritillary butterfly is an Annex II species that is a primary feature for designation of the site as this isolated community is an important outlier for the conservation of the species in West Wales.

75. The West Wales Marine cSAC is large in area (almost 740,000 hectares), and the Annex II species that is the primary reason for its selection is the Harbour Porpoise, as it provides important summer and winter habitat.

76. The Castlemartin Coast SPA covers an area of over 1,100 hectares and consists of carboniferous limestone sea cliffs and adjoining grassland, maritime heath and dunes, which support characteristic plants. The site supports populations of Chough, an Annex 1 species of the EC Birds Directive, denoting European importance. The Red-billed Chough is considered to be in favourable conservation status.

77. The Skokholm and Skomer SPA is over 14,000 hectares in size, and the islands are internationally important breeding grounds for seabirds, particularly petrels, gulls and auks. Over half of the world population of Manx Shearwater breed here. Three Annex 1 species of bird are the primary reason for designation: Storm Petrel, Chough and Short-eared Owl. Other qualifying species include: Lesser Black-backed Gull, Manx Shearwater and Puffin. It also has a seabird assemblage qualification of international importance.

78. Finally, the Skomer, Skokholm and the Seas off Pembrokeshire pSPA covers a large area of over 150,000 hectares and is a proposed marine extension of the Skokholm and Skomer SPA. Its draft conservation objectives relate to the breeding populations of Storm Petrel, Lesser Black-backed Gull and Atlantic Puffin and to the breeding bird assemblage.

79. The Stage 1 screening process is summarised in the Assessment Matrices in Egnedol's Habitats Regulations Assessment report (Document D15). This comprises consideration of potential pathways and potential effects for each impact feature during the construction, operation and decommissioning stages of the development, and regard is had to the potential effect magnitude and significance. The conclusions are that, apart from the Limestone Coast of South West Wales SAC, the Pembrokeshire Bat Sites and Bosherston Lakes SAC and the Pembrokeshire Marine SAC, the other SACs and SPAs can be screened out. The former 2 SACs are screened in on account of the potential habitat fragmentation and deterioration effects for the Greater Horseshoe Bat and the Greater and Lesser Horseshoe Bats respectively. The Marine SAC is screened in on account of potential habitat fragmentation/deterioration effects on Otter and potential noise, vibration, lighting and aqueous emissions effects and the effects of sea bed disturbance from the jack-up barge and cable laying work on the other SAC features.

80. Stage 2 Appropriate Assessment has been carried out for these 3 SACs to assess potential adverse effects on integrity taking into account proposed mitigation and compensation measures. These measures are described in the relevant parts of the Applicant's case.

81. Measures proposed for bats include: improved access and security for the tunnels; construction of a bat bunker, 3 bat houses and a number of bat boxes; new planting to protect and enhance commuting routes and foraging areas; a lighting plan that ensures dark corridors would be maintained; an Ecological Management Plan to improve the

available habitat; and a monitoring programme to ensure the strategy is successful. The mitigation programme would ensure that the present number of bats was safeguarded and would also provide improvements that would be able to support a significant increase. Thus the conservation objectives in respect of Greater and Lesser Horseshoe bats at the Limestone Coast of South West Wales SAC and the Pembrokeshire Bat Sites and Bosherston Lakes SAC would not be detrimentally affected.

82. Turning to the Pembrokeshire Marine SAC, mitigation in respect of Otter is proposed during site clearance and construction stages and in the design of permanent works to the culvert, stream and reservoirs. These include: replacement of the culvert with one of improved design for otter use; a buffer zone between the stream and the new road and a solid screening fence; screening for key locations along the stream; a Management Plan to safeguard habitat at the stream, reservoirs and woodland; measures to ensure jetty works would not cause noise and disturbance to otters; and a monitoring programme to ensure measures were successful.

83. Noise and vibration from jetty works and vessel operations would not have a significant effect on fish in the Haven, and the under-sea cable would be about 35 m below the sea-bed and so would also have no effect. The impact of jack-up barge feet on the sea-bed habitat would be negligible as they would be located in an area where there are no rare or protected species. No foul or process waters would be discharged to the Haven, and any surface water discharges would be subject to discharge consent controls via an environmental permit.

84. It is concluded that none of the habitat or species conservation objectives for which the SAC is designated would be likely to be subject to significant effects. Consideration has also been given to the potential for possible in-combination effects generated by other plans or projects during the construction or operational stages of the project. Particular attention has been paid to aquatic and aerial emissions and to noise and disturbance. The Milford Waterfront Marine Masterplan Development, a large mixed use development, is the only major project in the area with potential to cause a cumulative impact. However, assessment indicates there would be no cumulative impacts likely to significantly affect the Pembrokeshire Marine SAC.

***Landscape and Visual Impact*** (Documents A6.5 and B1)

85. A Landscape and Visual Impact Assessment (LVIA) has been carried out (Document A6.5) following best practice guidance, including the Guidelines for Landscape and Visual Impact Assessment, Third Edition (2013) and NRW's LANDMAP guidance. The scheme has been assessed in respect of key landscape and visual receptors, the LANDMAP Aspect Areas and relevant planning policy.

86. The Assessment concludes that effects on the landscape character of the site itself are "moderate/minor" and "minor/negligible" on the wider site context. The effects are largely minimised by the relatively limited visibility of the proposals and the baseline condition of the landscape, which already has a strongly industrialised character where significant structures are a common feature.

87. There are 3 distinct areas of landscape: the Blackbridge site, which is a former Royal Navy Armaments Depot and contains a number of large derelict buildings with piles of debris at the lower level and a more agricultural landscape on the headland where

there are two derelict reservoir structures; the Waterston Eco Park within the site of the former Gulf Oil Refinery, where the land is now largely gravel and hardstanding; and the proposed cheese factory, packaging facility and car park site on the north side of Hazelbeach Road, which lies to the east and north of an area of housing in Waterston village and some of which has been used for car parking in the past.

88. Thus the site as a whole comprises primarily brownfield land with a strong visual relationship with the industrial activities that dominate this part of the Haven, including that on the south side of the channel and the shipping in the Haven itself. Consequently, even though the proposal includes several large industrial structures, its impact on the landscape is assessed as above.

89. The visual impact has been assessed from 6 representative views, including 3 from the opposite side of the Haven. The LVIA (Document A6.5) contains photographic views from each viewpoint both with and without the proposed development, 3 from the north side of the Haven and 3 from the south (far) side. Of the 3 views on the north side, 2 of which are from Milford Haven, the significance of effects is assessed as "moderate/minor and adverse" from 2 and "moderate and adverse" at one. This is from a point midway along The Rath in Milford Haven.

90. The 3 views from the opposite side of the Haven are from the Coastal Path (2 No.) and the Pembrokeshire Coast National Park. The significance of visual effects is assessed as "moderate/minor and adverse" from the 2 Coastal Path viewpoints, which are approximately 1.25 km from the site, and "minor and adverse" from the National Park viewpoint, approximately 4.5 km away. The site is not visible from nearer National Park locations, and the special qualities of the National Park would not be affected by the proposed development. As for the effects on public rights of way, the Coastal Path would cross the proposed new access into the Blackbridge site. However, the overall effects on users of the public rights of way network would be minimal.

91. Notwithstanding the viewpoints used in the Assessment, the most noticeable visual impact would be in views from the leading edge of the settlement of Milford Haven, along The Rath and in the Pill area on the opposite side of Castle Pill. These views are oblique to the main Blackbridge site but relatively close to it. The scheme would replace the present large derelict buildings and wasteland areas with a degree of increased built form and massing. This balance of effect is considered overall to be "moderate adverse" in those close views.

***Traffic and Highway Safety*** (Documents B1and C3)

92. A Transport Assessment has been carried out (Document A6.10) in accordance with national guidance and has addressed both construction traffic and longer-term operational traffic. The key factor in the latter is that all biomass would be delivered to the site by ship or barge, using the refurbished jetty. Most would be sourced from overseas and would be delivered directly by ship, though locally sourced feedstock would be collected at Pembroke Dock and delivered to the site by barge. During the construction period, which would be expected to last 18-24 months, all heavy plant and machinery and some materials would also be delivered by barge, and it was confirmed at the hearing that the jetty refurbishment would be carried out at the beginning of the construction period.

93. Thus the only highway traffic generated on a day to day operational basis would be for people working on the site and by local service vehicles. In addition, during the construction period the local road network would be subject to increased traffic for construction workers and for some of the materials. The Transport Assessment has addressed the current state of the road network and the potential impact of these traffic increases on the basis that traffic from the Milford Haven direction would gain access to the Blackbridge site via the existing access alongside Castle Pill whilst traffic from the east would use the proposed new access off the B4325 on the western edge of Waterston, though at the hearing, in response to local residents' concerns about use of the Castle Pill access, it was stated that that access would only be used for emergency purposes.

94. Access to the Waterston site would be from Hazelbeach Road though, once the proposed new car park was constructed with access off the B4325 on the eastern edge of the village, workers would be required to park there and would be transported into the site by minibus in order to minimise traffic passing through Waterston village. The car park would also allow a similar minibus arrangement to be used for operational workers on the Blackbridge site, which would minimise traffic passing through Waterston village for all except those approaching the site from the Milford Haven direction.

95. It is estimated that during the construction period the increased traffic on the B4325 main road would be some 5%-10%, which would fall well below the 30% increase generally taken to indicate a significant impact. Thus the effect of construction traffic would not be significant.

96. On the basis of the assumptions made for the Transport Assessment, the long-term operation of the proposed development would generate traffic with a shift-work pattern which would lead to an increase in traffic on the B4325 of the order of 5%-10%. Again, this would not have a significant effect on road capacity or safety.

97. Detailed controls on both construction and operational traffic directions and access arrangements could be applied by the use of traffic management plans, which would be the subject of planning conditions.

98. In its Local Impact Report (Document C2) the Council raised a series of questions on the Transport Assessment and on the Traffic and Feedstock Logistics chapter of the Environmental Statement. The Appellant subsequently met with the relevant Council officers and together they visited the various parts of the local highway network referred to. Almost all of the queries were satisfactorily resolved or it was agreed could be adequately addressed through Construction and Operations Traffic Management Plans, which could be required by appropriate planning conditions, and by other planning conditions covering construction of the proposed new access road and delivery arrangements for feedstock material (all to be by boat). (Document C3)

99. The main remaining concern for both the Council and local residents is the lack of a footway along parts of Coombs Road which makes it an unsafe road for both local pedestrians (especially children of Blackbridge walking to and from school) and coastal path walkers (as that path runs along the main road through Blackbridge). It is not within Egnedol's control to provide a footway along Coombs Road. However, it would be able to provide an alternative route for coastal path walkers along the northern boundary of the Blackbridge site. In conjunction with a new footbridge over the Castle

Pill, the path would connect to the coastal path via Pier Road and Vicary Road on the edge of Milford Haven and close to the proposed new access road at its eastern end, as illustrated on Drawing EGW-01-052 (included in the Applicant's response to the Inspector's written questions – Document C3). Such a route has long been an objective of the Council and would bring useful benefits in amenity and safety. (Document C3)

100. Finally, some objectors have raised concerns about additional traffic generated in Pembroke Dock. It is emphasised that all feedstock for the process would be delivered to the site by boat and would not generally involve any highway traffic in Pembroke Dock. A possible facility there has been mentioned as a potential future feedstock supplier where local waste materials would be gathered and taken to the Blackbridge site by barge. However, that is outside the scope of the current application. (Document C3)

***Air Quality*** (Documents B1 and C3)

101. Air quality is monitored at several locations in the area for comparison with the ambient concentration standards specified in the UK Air Quality Strategy and the Air Quality (Wales) Regulations 2010. This indicates that air quality in the area is currently generally good.

102. Materials handling on the site would be fully enclosed, and the only source of air pollution from long-term operations would be the emissions from the stack. These would comprise the cleaned gas from the gasification process from which the cleaning processes would remove particulates and precursors for the formation of dioxins and furans. Thus the levels of emissions would be quite low even before they became dispersed in the atmosphere.

103. Dispersion from the stack has been modelled using standard methodologies and computer software. It has been based on 5 years of meteorological data from the Milford Haven weather station, terrain data reflecting the local topography, and continuous emissions at the maximum levels specified in European guidelines, even though the actual levels of emissions would be substantially less than these guideline requirements. Thus the results of the dispersion modelling represent a far worse situation than would actually occur in practice.

104. The modelling indicated that a flue of 60 metres height would be the optimum arrangement and, based on this design, air pollution was assessed at key local points for human exposure and at all environmental conservation sites within 10 km for ecological impact. The modelling exercise covered Nitrogen Dioxide ($NO_2$), Sulphur Dioxide ($SO_2$), fine particulate matter (PM10 and PM2.5), Carbon Monoxide (CO) and Hydrogen Chloride (HCl).

105. Potential human exposure was estimated to be less than 1% of the national standards for all parameters except $NO_2$ and $SO_2$, which were modelled at between 4% and 7%. Air pollution effects at all conservation areas were assessed at less than 1% of national standards, except at Hook Wood where some were assessed at almost 3%. All of these are considered to be low and unlikely to significantly contribute towards air pollution or acid deposition. It should also be remembered that these dispersion modelling results were based on far worse assumptions of emission levels than would actually occur from the proposed gasification and gas cleaning processes.

106. Some local residents have expressed concern that the height of the top of the stack would not be that much higher than some residential properties in the Blackbridge area. However, the dispersion modelling has taken full account of the local topography using detailed terrain data and has concluded that the process would not cause local air pollution. It should also be remembered that the development would be subject to an environmental permit, which would validate the emission characteristics in detail and ensure adequate environmental protection. (Document C3)

107. Plume visibility and odour risks have also been considered. The low concentration of moisture in the feedstock would ensure that there would be no visible plume of water vapour from the flue. As to odour, the stack emission would not be odorous, and all materials handing on the site would be fully enclosed.

108. Finally, during construction there would be potential for the generation of dust but this would be minimised by best practice methods, which would be specified in a Construction Stage Environmental Management Plan (covered by a planning condition). The nearest dwellings are over 300 metres from the site and, even at these, there would be no perceivable dust nuisance.

***Noise and Vibration*** (Documents B1 and C3)

109. The potential for generation of noise and vibration has been considered for both the construction period and the long-term operation of the site. Monitoring of the current baseline noise levels, both during the daytime and at night, has been carried out at several locations on and off the site so that the potential impact of noise generated by the scheme can be assessed for the nearest sensitive receptors (dwellings or walkers). The standard methodology prescribed in BS4142:2014, Method for rating industrial noise affecting mixed residential and industrial areas, has been used, and regard has been had to the advice in Technical Advice Note (TAN) 11: Noise. All equipment used was suitably calibrated.

110. During the construction period noise levels generated by a range of construction equipment working at various locations on the site were assessed, and predicted noise levels from these at the nearest sensitive receptors were almost all calculated to be around or only slightly above the current background levels. Only piling and drilling equipment would generate higher noise levels, and if these activities were required they would only take place for short periods of time. Noise barriers would mitigate any effects, and this and other measures could be ensured through a Construction Management Plan, which could be a requirement of a planning condition.

111. Only on-shore piling operations (if any is required) would be likely to give rise to vibrations. However, the nearest dwelling houses are so far away that there would be no noticeable effects. Long-term operations on the site would not give rise to any vibrations.

112. Long-term operations on the site would generate some noise but it would be attenuated to levels below background noise levels before it reached any noise sensitive receptors outside the site. Thus it would be unlikely to cause any complaints.

113. The Council has questioned the calculation allowances for sound abatement with distance. However, this has followed well established methodology and assumptions and is considered to provide reliable estimates. (Document C3)

***Contaminated Land*** (Document B1)

114. Both parts of the site have been subject to land contamination from their previous uses, including heavy metals, asbestos, hydrocarbons, polycyclic aromatic hydrocarbons (PAHs) and polychlorinated biphenyls (PCBs). At Blackbridge there were also explosive residues but these have been removed and validation certificates issued. A substantial amount of historical records of former land uses, contamination and ground conditions have been reviewed, as well as records of trial pits, boreholes and other types of ground surveys. Conceptual modelling techniques have been applied to assess potential risks based on potential sources, pathways and sensitive receptors (both human and environmental, including the Pembrokeshire Marine SAC).

115. The Waterston part of the site was formerly part of the Gulf Oil refinery, and the need for remediation works to reduce contamination risks was identified some time ago. Those works have already been carried out and appropriate validation certificates have been issued.

116. The Blackbridge site still requires more location-specific site investigation before the necessary remedial works can be identified, and this would be carried out prior to detailed design of the scheme. A set of standard contaminated land conditions could be applied to any planning permission and would adequately address these requirements.

***Drainage*** (Documents B1 and D22)

117. The site is not subject to any risk of tidal or fluvial flooding, except the area immediately alongside the small reservoir and stream. Rainfall on to the roofs of the buildings would be collected for use within the processes. Surface water from roads and car parks at the Blackbridge part of the site would be discharged to the Haven at the same point as at present (a culvert to the west of the jetty) via oil interceptors to contain any oils washed off. At the Waterston site surface water would be discharged to existing streams, as at present.

118. As for foul drainage, at Waterston this would be drained via the existing foul water drainage systems or a connection to the foul sewer in Hazelbeach Road. At the Blackbridge site it would be collected in a cesspit and removed periodically by tanker. There would be no foul water or process discharges to the Haven.

***Archaeology and Cultural Heritage*** (Document B1)

119. The site lies within the Milford Haven Waterway Landscape of Outstanding Historic Interest within the Register of Landscapes of Historic Interest in Wales, published by Cadw, CCW and ICOMOS UK in 1998. The area has also been subdivided into historic landscape character areas (HLCAs), and these have been used as the basis for an ASIDOHL2 study (i.e. Assessment of the Significance of Impacts of Development on Historic Landscape, Revised (2$^{nd}$) Edition).

120. The Blackbridge site lies within "HLCA307-Milford Haven", though it is not typical of most of the HLCA. The proposed development would have a direct effect on the remains of the former RNAD establishment, the large buildings of which are features of local importance. However, only one of these would be demolished, and the impact on them is assessed as "very slight". For the RNAD site as a whole the relative impact is assessed as at most "moderate". Other features on the site include the remains of a railway line and a standing stone on the headland overlooking the main site, and the

impact on these is assessed as "very slight". The proposed development would only slightly reduce the landscape value of the former RNAD site.

121. The Waterston site lies within an area of land formerly occupied by the Gulf Oil Refinery, which closed in 1997. Its site has now been subdivided and is occupied by the Dragon LNG terminal, the SEM Logistics chemical storage facility, and by the Applicant. The proposed development would have a "very slight" effect on "HLCA310-Gulf Oil Refinery".

122. As to indirect effects on the various historic landscape areas, the development would have a "moderate" indirect effect on "HLCA307-Milford Haven" due to changes in the form of the built development and views. Indirect effects on "HLCA310-Gulf Oil Refinery" are similarly assessed as "moderate". The assessment also considered indirect impacts on other HLCAs but found no effects on them to be more that "very slight".

123. The significance of the impacts on HLCAs 307 and 310 are considered to be "moderate" but the reduction in the value of the historic landscapes is "low". The development would protect and enhance the views associated with the historic landscape character areas, which are generally comprised and dominated by heavy industrial development.

***Socio-economics*** (Documents B1 and C6)

124. The development would have a highly positive socio-economic impact on the local area. One of the key aims of the Local Development Plan is to strengthen economic and social cohesion, and LDP policies promote commerce and the use of renewable energy. The proposed development would support these aims through the creation of jobs and investment in the local economy.

125. During the construction phase approximately 300 jobs would be created and substantial capital investment would be made. Once fully operational the development would generate some 450 jobs of various sorts and business areas: industrial power and energy; aquaculture; horticulture; food production; shipping; logistics; and scientific research. It is estimated that operational and maintenance costs would be about £9.15M per year, most of which would flow into the local economy.

126. The development would be an exemplar project for sustainability, converting sustainably sourced biomass into low-carbon electricity for the national grid. It has the potential to raise the profile of Pembrokeshire within this industry sector.

***Safety and Sustainability*** (Document C3)

127. Several third party objectors, and particularly those representing Biofuelwatch (a pressure group that opposes all biofuel energy schemes), have expressed views on the safety and sustainability of the scheme. On the question of safety, the gasification process is a well-established industry with some 1000 projects worldwide. It is a flexible, reliable commercial technology that has been used in the chemical industry for 60 years and for 35 years in the power industry. The objectors' assertions that it is unproven and unreliable are unfounded.

128. As to sustainability, the process would use a combination of virgin biomass from sustainable plantations and pre-prepared waste derived fuel (WDF), much of which is currently exported to Europe and further afield for use in energy production. The relative proportions would be chosen based on the prevailing market conditions at the time and the terms of the environmental permit for the process. Government policy supports the use of these materials for sustainable energy production, and the use of residual waste for energy production is consistent with the waste hierarchy.

129. Several objectors have also referred to reports by Chatham House (The Royal Institute of International Affairs) that criticise policy reliance on the carbon-neutral attributes of biomass. However, those reports are controversial amongst international experts and do not present an objective view of the current state of scientific understanding of the climate effects of bio-energy. The use of woody biomass is strongly supported by the EU Renewable Energy Directive.

130. The use of advanced conversion technologies, such as gasification, provides the opportunity to produce high value products, such as biofuel, in addition to electricity and heat. The gasification of fuel also offers the best route to high efficiency, the lowest emissions, and the high value recovery of energy production and downstream products. Furthermore, it is a requirement of the environmental permitting system that the best available technology (BAT) is used, which would ensure that the process used would be the most reliable, efficient and effective possible.

131. Objectors have also mentioned the Well-Being of Future Generations (Wales) Act 2015 (the WBFG Act). It is noteworthy that Pembrokeshire County Council carried out a survey throughout the County to identify what well-being meant to the people of Pembrokeshire and how the aims of the Act could best be met. The following key issues were identified: the age profile of the population, which is skewed towards older people as many younger people leave to find work; the need to retain younger people by providing a range of suitable and attractive jobs; the limited job choices currently available; the gap in job opportunities left by the decline of the petro-chemical industry in the area; and the economic needs of the area.

132. A well designed, environmentally sensitive and sustainable development, which utilises the unique skill sets of the population, whilst taking advantage of the sea port access for fuel delivery and the strong and appropriately skilled local supply chain, would provide exciting local employment opportunities for a wide range of adults and young people.

133. Far from being contradictory to the aims of the WBFG Act, the development would support and enhance the well-being of future generations by providing vibrant and varied employment opportunities and by sustaining existing local supply chains, a specific feature of the requirements for well-being identified by the people of Pembrokeshire.

**Consultation Responses**

134. On confirmation that the application was valid PINS undertook the required consultation and publicity measures, and 28 letters of objection, 6 letters of support and 8 other representations were received. The main points are summarised below.

***Natural Resources Wales*** (Rep4 of Document C1 & Document C7, supplemented after suspension period by Documents D20 and D25)

135. NRW's comments on the main application documents were that, in broad terms, the Environmental Statement does not adequately consider the indirect and cumulative impacts of the development on the marine environment and European Protected Species (EPSs), the report to inform Habitats Regulations Assessment (HRA) does not consider the project as a whole, and the same report does not give adequate consideration to the effects on EPSs, particularly bats, otters and grey seal. As a consequence, it cannot be concluded that the proposed development would not have a significant effect on either the marine or terrestrial European designated sites in the area or on EPSs. It was further advised that, on the information provided, it is unlikely that an EPS licence would be issued.

136. NRW further advised that the HRA should be carried out in respect of the project as a whole, including the proposed jetty works, and should cover all relevant protected sites: the Pembrokeshire Marine SAC; Pembrokeshire Bat Sites and Bosherston Lakes SAC; Limestone Coast of South-West Pembrokeshire SAC; and the Castlemartin Coast SAC. The scheme would need an Environmental Permit under Section 5.1 of the Environmental Permitting Regulations 2010 and (for the jetty works) a Marine Licence under the Marine and Coastal Access Act 2009. These applications have not yet been made and will require appropriate environmental information. However, information is still needed for the current application to enable the impacts of the project as a whole to be assessed.

137. The above represents NRW's position at the consultation stage and at the hearing and, together with a similar stance being taken by Pembrokeshire County Council, led to the conclusion at the hearing that the timetable for the DNS should be suspended for 6 months to enable the additional environmental information to be collected, assessed and presented in the hope that a measure of agreement might be achieved amongst the 3 main parties. Some progress has been made and NRW now considers that many of its concerns have been adequately addressed in the latest further environmental information or could be dealt with by improvements to the Environmental and Ecological Management Plans (EMP) secured by planning condition.

BATS

138. With regard to the impact on bats, it is common ground that the Blackbridge site is used by several bat species, including the Greater and Lesser Horseshoe bats, Common and Soprano Pipistrelles, Myotis species and Brown Long-Eared bats, and is within the flight range of other local bat roosts, including those of the Pembrokeshire Bat Sites and Bosherston Lakes SAC and the Limestone Coast of South-West Wales SAC, for which Horseshoe bats are a qualifying feature. The ES does not adequately consider the impacts of the development on the bat species present.

139. NRW's particular concerns on the submitted ES were as follows:

- insufficient information on the impact on bats roosting in the blast wall and stone arch and on corresponding mitigation measures to secure ongoing future use by bats;

- insufficient information on the impacts due to alterations to the tunnel entrances and nearby vegetation clearance and lighting;

- considerable doubt about the bat houses proposed to mitigate the impact of loss of roosts in the existing buildings;
- insufficient information on the design of the proposed access road to enable its impact on the area of woodland to be assessed; the woodland is a key link for bats to disperse eastwards towards bat SAC sites and other roost sites;
- insufficient information on proposed site lighting to enable its impact on bats to be assessed;
- inadequate assessment of vegetation clearance with regard to roost sites, foraging and routes for dispersal to and from the site;
- inadequate justification for mitigation measures as the quantum of necessary mitigation measures can only be determined when the full impacts on the bats and their habitats have been assessed.

140. Following the period of suspension, it is now confirmed that the storage building (Building 4) would be located so as to ensure its foundations would not affect the subterranean features accessed by bats via the stone arch and that an adequate buffer would be maintained between the building and the blast wall. Thus there would not be significant effects on these habitats.

141. As for vegetation, it is important that appropriately located and robust vegetated flight corridors would be maintained for use by bats, especially near the tunnels and stone arch. Assurance has now been provided that buffer zones would be maintained at each tunnel entrance and that the corridor along the cliff face near Building 9 would be maintained, supported by additional planting (although this would take time to become established). These various measures would need to be included in a revised EMP.

142. The proposed alignment and design details of the access road have now been provided, and a tree survey of the route has confirmed that none of the affected trees are likely to support bat roosts. More information on the mitigation proposals for bat houses has been provided, although some details would need to be improved. However, these could be dealt with through controls under an EPS licence in due course.

143. Finally, the lighting strategy has been clarified for both the construction and operational phases of the development. Key improvements include the removal of some potentially intrusive lights, the use of motion sensors on others and proposals for daytime working only during construction and barge deliveries. A Construction Environmental Management Plan (CEMP) and operational Environmental Management Plan (EMP) could be secured by condition.

OTTERS

144. Otters are also a European Protected Species and one of the features for which the adjacent Pembrokeshire Marine SAC has been designated. Otters use the Blackbridge foreshore and the watercourse and small lakes that extend inland on the eastern side of the Blackbridge site. NRW's assessment of the ES submission was that further information and clarification was needed on the following matters:

- the impact of the scheme on the watercourse and otter movements along it;

- the impact of the proposed new access on the area of woodland close to the reservoirs, which support potential breeding habitat for otter;

- disturbance caused by refurbishment work on the jetty and by use of the foreshore for the construction phase of the scheme.

145. In the same way as for bats, the impacts on otters need to be properly assessed before it is possible to determine the effectiveness of any proposed mitigation measures. The outline mitigation measures in the submitted ES are not sufficient to determine whether favourable conservation status would be maintained or not, and that matter was further addressed during the period of suspension.

146. The further environmental information now provided has addressed NRW's concerns for otters. The potential for effects on the watercourse and the woodland close to the reservoirs has been considered, and more information has been provided on the proposed barge landing areas on the foreshore. In addition, clarification has been provided on the proposed permissive footpath with a replacement swing-bridge over Castle Pill. It is important that otters be able to continue to use both the foreshore and Castle Pill areas throughout the construction and operational phases of the development.

147. Whilst the submitted EMP does not adequately reflect the required mitigation measures now proposed for otters, adequate measures could be included in an amended EMP, which could be required by a suitable planning condition. On this basis NRW's concerns for otters could be overcome.

MARINE

148. Grey seal is an Annex II species (i.e. Annex II of the Habitats Regulations, denoting species whose conservation requires the designation of SACs) that is a primary feature in designation of the Pembrokeshire Marine SAC, as are several migratory fish: Sea and River Lamprey, Twaite and Allis Shad. Noise and disruption caused by construction work on the jetty has the potential to impact on these species, and insufficient information was provided in the ES to be able to assess this risk, particularly the levels of noise, construction methods and mitigation measures. Consideration also needed to be given to possible effects of the directional drilling beneath the bed of the Haven for the National Grid connection cable.

149. The jetty construction works (and the mooring of barges close to the shore) would impact on the sea bed with potential to affect several habitats that are primary features of the SAC: reefs; estuaries; and large shallow inlets and bays. "Mudflats and sandflats not covered by seawater at high tide" is another qualifying feature within the project footprint. Inadequate information was provided in the ES on the description of these works, the methods of construction and the extent and severity of any impacts. Whilst the Applicant indicated that the seabed had been inspected and no rare or protected species observed, no details were provided, and it was not possible to assess whether or not the project would have an adverse impact on the various marine habitats. The period of suspension gave Egnedol the opportunity to address these shortcomings.

150. However, the additional environmental information now presented is still not sufficient in some matters. Considering the marine habitats first, the worst case scenario has still not been adequately addressed as the footprints affected, the degree of permanent loss, and the likely impact on each of the habitat features have not been adequately defined. The drop-down video camera survey was not fit for purpose as the quality of its images was not good enough to be able to gain an understanding of the flora and fauna present in the habitats surveyed.

151. Egnedol has argued that the areas of habitat affected would be very small in comparison with the total area of the Marine SAC. However, it is the quality and nature of the habitat loss that is of particular importance, and that has not been properly assessed. The whole footprint of the marine project would fall within the designated SAC habitat features: intertidal mudflats, estuary and large shallow inlets and bays. However, other than the intertidal mudflats feature, little consideration has been given to the other habitat features, and the drop-down survey was not of sufficient quality to provide the necessary information on the habitats that were surveyed.

152. The estuary and large shallow inlets and bays habitat features are comprised of a mosaic of habitat types which contribute to the diversity of the habitat features, and some habitat types are more sensitive or more resilient than others. Consequently, the simplistic assessment of impact based on comparison of the area affected with the total area of the SAC is not sufficient. The loss needs to be assessed in terms of the quality of the habitats affected and their sensitivity and recoverability if the impact is to be fully understood. The information provided is not sufficient to be able to do this.

153. Turning to consider the potential for impact on marine mammals and fish, it is considered that the noise modelling and assessment (for piling work at the jetty) is incomplete and inaccurate. It has concentrated on the grey seal with little regard to other species, in particular the harbour porpoise which is a feature of the West Wales Marine cSAC. Although the seal is generally more sensitive to noise, harbour porpoise are known to respond strongly to piling noise (research has shown them to be affected up to 20-25 km away). One of the conservation objectives of the West Wales Marine cSAC concerns noise disturbance, and the assessment should address disturbance, as well as injury potential, in relation to that cSAC to inform the shadow HRA.

154. The assessment of potential impacts for mobile species, such as seal and harbour porpoise, should take into account all SACs in the Marine Mammal Management Unit (MMMU), which is recognised as the appropriate scale for considering impacts. For seals the appropriate unit is the South and West England and Wales MMMU, and for harbour porpoise it is the Celtic and Irish Seas MMMU. All SACs in the appropriate MMMU should be assessed taking into account the mobility of these species. Evidence needs to be provided to show that impacts can be ruled out beyond all reasonable doubt for all mobile feature species in these SACs. Even though potential injury contours fall outside a SAC, one cannot necessarily rule out the chance of likely significant effects on such a feature. Egnedol's assessment has not addressed this matter.

155. Turning to seals, Egnedol has relied on the SeaWatch data for evidence of the distribution of marine mammals in the area. However, that data relies on casual sightings and is not based on routinely collected data. Without further details on its content, it should not be relied upon. Mention has been made of seal tracking data. However, that is also not representative, as its emphasis on seals being present around

the Skomer and Ramsay islands is inevitable because that is where the tagging takes place. The Haven is well within the normal traffic and foraging ranges of weaned pups and adult seals, and their presence in the Haven near the application site cannot be simply ruled out.

156. Egnedol has used the NOAA (American National Oceanic and Atmospheric Administration) thresholds for its assessment of potential impacts of piling noise. It is accepted that these are highly precautionary, but no assessment has been carried out of impact zones for high and mid frequency cetaceans (whales, dolphins, porpoises). These would be wider than for lower frequency species and need to be considered bearing in mind the known regular presence of porpoise and dolphins around the Pembrokeshire coast.

157. In conclusion, the noise assessment is deficient in respect of impact pathways for harbour porpoise and lamprey species. It is also unclear in respect of mitigation measures. Standard piling mitigation measures may not be sufficient to safeguard harbour porpoise and other methods should be considered. It is noted that it would be proposed to work only under low tide conditions in order to take advantage of the fact that noise attenuation is better in shallow water. However, no information is provided on the likely scale and duration of the piling operations or on any need for seasonal timings to reduce risks to harbour porpoise.

158. On wider matters, there is no assessment of any sort in respect of the 2 lamprey SAC features, and the assessments need to take into account the thresholds for altered behaviour and not just for injury. Clearly, these are much lower thresholds.

CONCLUSION

159. In conclusion, whilst the further information submitted at the end of the period of suspension has enabled progress to be made in respect of bats and otters, it is still insufficient to enable the Competent Authority (in this case the Welsh Government) to undertake all necessary HRAs under the Conservation of Habitats and Species Regulations 2010 (as amended), particularly in respect of the marine environment. There are discrepancies, lack of information and underassessment of potential impacts on the marine environment, including failure to give full consideration to all possible impact pathways for marine mammals. It also indicates deficiencies in understanding of the habitat receptors and conservation objectives of the potentially affected areas.

160. On other matters, it has not been possible to fully assess risks due to air pollution as this needs to be done in conjunction with an environmental permit application (which has not yet been made) when full details of the process and feedstock would be known. In addition, due to the delay in progressing the current application, the in-combination HRA assessment should include consideration of the proposed Valero Cogen plant on the opposite side of the Haven, which has progressed more quickly through the DNS process.

161. As a result of the deficiencies in the environmental information submitted the HRA and sHRA information provided is incomplete and does not prove beyond reasonable scientific doubt that the proposed development would not have a likely significant effect on some of the Pembrokeshire European SACs.

***Objectors*** (OBJ1-OBJ28 of Document C1)

162. Several objectors have criticised Egnedol's expertise and ability to design and operate a plant such as this, and some have linked the Company Directors to a failed venture for a gasification plant in the Rhymney Valley in 2008/09. The Company has no track record in wood and waste gasification. In fact, no company has ever been successful in getting a plant of this sort to work in the UK. Gasifier plants elsewhere in the World have a history of technical problems and shut-downs, and no reliance can be placed on the continuous supply of waste heat and gas on which many of the eco park units would depend. In addition, 2 of the technologies planned, the production of aviation biofuel from waste gas and the indoor farming of algae are unproven and have not yet been done on a commercial scale. No confidence can be placed in the promised jobs and benefits.

163. The proposal is poorly placed from a safety point of view. There are already 5 top-tier sites, as defined under the Control of Major Accident Hazards Regulations (COMAH), and the site falls partly within and partly close to the boundaries of 2 of these, Dragon LNG and SEM Logistics. These have been designated as COMAH sites for a reason, and people working close to them are at risk of major accidents. Furthermore, the proposed gasification plant is a volatile process and itself presents risks to the safety of workers and local residents if it is constructed and managed by Egnedol, who have no successful track record in this field.

164. The Company has never clearly explained where the feedstock would come from, and any explanations given have been quite varied. Its consultations with local people indicated the use of wood from forests in Morocco and Greece, which would be processed into wood chippings. It was also understood it would be shipped to Pembroke Dock where it would be transferred to barges for delivery to the site. Such long distance transportation of fuel would be quite unsustainable, and no such supplies are yet available.

165. Mention has also been made of using timber from local forestry sources, though these are already earmarked for other uses. Furthermore, this would involve the construction of preparation facilities in the area and would generate HGV traffic to that facility. It has also been stated that 50% of the feedstock would be waste derived fuel sourced locally, and use of that large quantity of waste material would surely divert waste from re-use and recycling uses higher up the waste hierarchy, contrary to planning policy. Again, this would generate HGV traffic to the barge loading facility at Pembroke Dock.

166. The Applicant says that the provenance of the feedstock material is not a planning issue. However, its viability, transport costs and sustainable sourcing are matters that are relevant, particularly as the Applicant claims the project has been designed to meet the energy, sustainability and job creation criteria established in national and Welsh Government policy. It is arguable that the use of biomass is as unsustainable as other fossil fuels as it takes several decades for new trees to grow and absorb the carbon dioxide emitted in the power generation process, even if one assumes that new trees would be planted and left alone for such a lengthy period of time. Importing large quantities of biomass from abroad raises significant ethical issues and does not support local biodiversity. Sustainability standards for biomass sourcing cannot be guaranteed for such supplies.

167. Mention has also been made of 2 Chatham House reports (The Royal Institute of International Affairs) which conclude that national and international policy support for biomass energy is based incorrectly on the assumption that its use is carbon neutral. However, this cannot be assumed. Biomass emits more carbon per unit of energy than most carbon fuels.

168. In these and other respects the scheme does not comply with the Well-Being of Future Generations (Wales) Act 2015 (the WBFG Act). The WBFG Act identifies 7 well-being goals: a prosperous Wales; a resilient Wales; a healthier Wales; a more equal Wales; a Wales of cohesive communities; a Wales of vibrant culture and thriving Welsh language; and a globally responsible Wales. The scheme supports few, if any, of these goals. However, goals 1 (a prosperous Wales) and 7 (a globally responsible Wales) are particularly relevant.

169. Goal 1, a prosperous Wales, aims to achieve an innovative, productive and low carbon society which recognises the limits of the global environment and therefore uses resources efficiently and proportionately. However, although this scheme aims to use some of the $CO_2$ produced, significant $CO_2$ emissions would contribute towards global warming, a matter the Welsh Government needs to address with greater urgency.

170. Furthermore, a substantial proportion of the feedstock would be sourced from overseas without any guarantee whatsoever that it was sustainable. The International Energy Agency defines renewable energy as "energy derived from natural processes (e.g. sunlight and wind) that are replenished at a faster rate than they are consumed". The Applicant claims the scheme would provide renewable energy but with no evidence to support the claim. There is no evidence the timber would be produced sustainably over the lifetime of the project, and in this respect the scheme would conflict with Well-Being Goal 1.

171. Goal 7, a globally responsible Wales, requires that, when doing anything to improve the economic, social, environmental and cultural well-being of Wales, it takes account of whether doing such a thing would make a positive contribution to global well-being. For the same reasons as above, $CO_2$ and feedstock sourcing, the scheme would contribute towards global warming and be detrimental to global well-being. The WBFG Act places a duty on public bodies to improve the economic, social and environmental well-being of Wales, and Planning Policy Wales requires that Ministers take reasonable steps to meet the objectives of the Act. Notwithstanding the limited potential to provide jobs and economic investment, the project should be rejected on wider well-being grounds.

172. A number of specific environmental concerns have also been raised, particularly in respect of highway safety, air pollution, noise, and landscape and visual impact. Vehicular access to the site would be via the B4325 Coombes Road, which is a dangerous road, particularly at Blackbridge where it is narrow and steeply inclined with sharp bends. Over part of its length it also has no footway, and it is dangerous for pedestrians (children walking to school in Milford Haven and walkers on the Coastal Path, which follows the road for part of its length). There are regular incidents of traffic problems and accidents on the B4325, and increased traffic generated by the proposed development would exacerbate the risks to highway and pedestrian safety.

173. The main access to the site in the past has been from Castle Hall Road, off Coombes Road, next to Castle Pill, which is a residential road with difficult junctions. This access would not be suitable for any significant new traffic use.

174. If Pembroke Dock was used as a centre for the collection of waste derived feedstock (or locally sourced timber) it would lead to increased traffic on the A477 trunk road, which is already busy with local traffic and heavy vehicles for the port, ferry port and industrial units in the dockyard. Increased traffic would further exacerbate concerns about highway safety, air quality and noise.

175. At the site itself, air quality would be affected by emissions from the stack. The proposed 60 m high stack would have a top level at approximately 68 m AOD, which is comparable with the levels of many residential properties on the edges of Milford Haven close to the site. Such local properties would be at risk of air pollution, particularly under certain climatic conditions when dispersion of the emissions would tend to be lateral rather than upwards. Little confidence can be placed in the air dispersion modelling carried out by the Applicant. The waste emissions have the potential to contain nitrogen gases and other products that are harmful to human health. In addition, the gasification process proposed is difficult to control, and there is a chance that unfiltered waste gases might be discharged in the event of build-up of high pressures in the process.

176. The plant would generate noise, both during construction and during long-term operation. Egnedol says it will liaise with local residents in respect of any construction activities likely to give rise to high levels of noise. However, its failure to consult with local residents effectively during preparation of the application gives little confidence in this promise. As for long-term operations, there has been little demonstration of likely compliance with the British Standard, BS4142, and there are shortcomings in the modelling calculations for noise attenuation.

177. Views of the development from the nearest edges of Milford Haven (Front Street, The Rath and Docks area) would be very prominent, and part of this area contains many small businesses and is important for local tourism. The prominent appearance would be harmful to amenity in that area.

178. Finally, doubts have been expressed about the economic and employment benefits claimed for the project. Whilst it is understandable that the prospect of almost 600 jobs being created and a substantial sum of money being invested in the area may be seen as significant benefits, no evidence has been provided of the economic viability of the ancillary businesses, and the success of the project would be far from assured. The Blackbridge site is designated as a "strategic employment site" in the Pembrokeshire Local Development Plan in order "to support the future development of port and energy related activities in proximity to the Milford Haven Waterway" (Policy SP3). However, if it were used for experimental activities with little prospect of success, it would fail to meet the intended use of the site and undermine the long-term sustainable economic development of the area.

179. The area is in great need of economic stimulus as it has a low average income level and high levels of debt and poverty. It is a low wage economy highly dependent on public subsidy. It is important that promised jobs are scrutinised for their skill and wage levels and that they would be available for local people, supported by appropriate recruitment and training arrangements. However, no assurance has been provided in

this regard. Furthermore, if the installation was never to become fully operational (and doubts have been expressed about both the Applicant and the technology proposed) then there would clearly be no local benefits at all.

***Other Responses*** (REP1-REP3, REP5-REP8 and SUP1-SUP6 of Document C1)

180. Supporters of the proposal made particular mention of job opportunities and benefits to the local economy, which has become depressed following the closure of the Murco oil refinery. As can be seen from the arrival of the LNG plant, projects such as this can provide sustainable work for years to come, to the benefit of the well-being of local residents, which should be given greater weight than the unfounded concerns of the green activists, who have no interest in the local people.

181. The site has been derelict for many years, and it would benefit the local area for it to be brought back into economic use. Green activists also objected to the LNG development on the adjacent former oil refinery site but it has proved both safe and beneficial to the local economy. Although the current proposal includes elements of new technology, the successful use of which has been questioned, the scheme should be given the benefit of any doubt. It has the potential to be of major benefit to the area.

182. One supporter referred to the benefits of integrating academia with the business world and to the opportunities the proposal offered for enrichment of the local economy with high tech industries associated with the project. In addition to its commercial value, the project could be a catalyst for an educational, research and innovation centre of international interest.

183. Gasification is a well-established process that was used during both world wars to produce syngas. Nowadays, modern installations and careful choice of feedstock provide a 21st Century approach to energy generation. Similar schemes are already in operation in Finland and the USA using wood and prepared waste, and technology to use agricultural residues is subject to investment in India, South Africa, Australia and China. It is evident that a secure, safe and expanding industry now operates globally to augment traditional energy generation facilities.

184. Contrary to the assertions of objectors, many of the commercial gasifiers are already utilised to produce liquid fuels, chemical feedstocks and methanol. In the USA such installations are being integrated to create "energy-themed science parks" as a hub for business incubators using low cost power and heat. In Wales, aquaculture enterprises are emerging in Anglesey and Port Talbot powered by gasification technology. The current proposal would provide ideal facilities for the production of fish and prawn using heat for the aquaculture, and the biological and chemical process opportunities have potential for producing novel products in the food, cosmetics and health industries.

185. There is growing interest throughout the Country for a sustainable aquaculture industry, and there is significant aquaculture expertise in Swansea, Aberystwyth and Bangor Universities. In addition, algal biomass production is subject to global interest and R&D, not only as a biofuel source, but also in human food supplements as a source of omega-3 fatty acids and astaxanthin, used to mitigate macular degeneration of the retina in elderly people. The proposed eco park units would provide valuable

opportunities to further these technologies, including liaison with further and higher education establishments in Wales.

186. Some of the objectors' comments on the project are quite incorrect, particularly in respect of the novelty of its process, its risk profile and the risks to fish and prawns grown using the generated heat. The supporter has considerable personal experience in developing feed for fish farms in the aquatic biosciences sector and is confident the proposed scheme would make a significant contribution to the socio-economic regeneration of this region of Wales.

187. A number of other representations were also received as follows:

- on behalf of SEM Logistics, who occupy a neighbouring site, detailing several queries to which Egnedol has responded;
- on behalf of Dragon LNG, also listing several detailed queries;
- from the Pembrokeshire Coast National Park Authority, confirming agreement that the scheme would not have a significant visual impact on the National Park;
- from Natural Resources Wales, as reported above;
- from the Health and Safety Executive, confirming it has no objection to a grant of planning permission;
- from the Milford Haven Port Authority, referring to the need for Marine Works and Marine Licences for the jetty and any seabed works, confirming that there are no navigational constraints on the proposed use of the Haven by shipping for the project, and expressing the opinion that the development would benefit the local economy and the industrial cluster around the Haven Waterway;
- from Cadw, assessing the impact on the setting of Scheduled Ancient Monuments on the opposite side of the Haven as minor, on the registered historic park and garden of Castle Hall near to the site as nil, and no impact on the Historic Landscape Character Areas of Milford Haven, the Gulf Oil Refinery and Western-Honeyborough, and agreeing with the ASIDOHL assessment in the ES, concluding that the scheme would not have a significant effect on the registered historic landscape;
- from Paul Davies AM, asking for a public hearing to be held to allow local people and interested parties to give their views.

**Local Impact Report** (Document C2)

188. Pembrokeshire County Council's Local Impact Report presents its assessment on a number of matters, particularly transportation, pollution, landscape and visual impacts, nature conservation, and social and economic effects. It also includes suggested planning conditions should permission be granted. The main points are summarised below.

189. Further comments were also provided at the end of the suspension period (Documents D24.1 and D24.2), and these have also been taken into account below. At a general level, the Council commented on the difficulty of undertaking comprehensive and robust assessments of environmental effects when the information has been

received in a piecemeal fashion over several months, particularly when there are problems of clarity and consistency. In addition, several of the additional plans submitted at the end of the suspension period do not have specified scales, several unexplained changes or additions have been made in Revision D of the Master Plan (Drawing D1), and some features still lack detail (e.g. conveyors and supporting structures between buildings, the proposed new swing bridge, and the access road).

***Local Planning Policy***

190. In principle, the proposal accords with the broad thrust of LDP policies on port and energy related developments. However, other policy considerations are also relevant. Most of the development would be within the designated area for Policy SP 2 (the Strategic Policy on Port and Energy Related Development) but the packaging facility, cheese factory and car park at Waterston would be located outside that area and in the open countryside, contrary to Policy SP 16 (The Countryside). They would be outside the settlement boundary (Policy SP 13) and not on land allocated for employment use (Policies SP 3 and GN.5). Although Policy GN.6 (Employment Proposals) can permit such development, its location has to be justified, and in this case it remains to be explained why these units could not be located on the existing industrial premises south of Hazelbeach Road.

191. Policy GN.4 (Resource Efficiency and Renewable and Low-carbon Energy Proposals) supports the proposal in principle but whether it is considered "environmentally acceptable" involves consideration of the matters below against other LDP policies.

***Transportation***

192. A lengthy list of detailed questions was raised on the Applicant's Transport Assessment and on the Traffic and Feedstock Logistics Chapter of the Environmental Statement. However, these were subsequently addressed at a meeting with Egnedol and almost all were satisfactorily resolved or it was agreed could be adequately dealt with through Construction and Operations Traffic Management Plans, which could be required by appropriate planning conditions, or by other planning conditions. The main remaining concern is the lack of a footway along part of Coombs Road (the B4325), which is a particularly unsafe road for pedestrians (children from Blackbridge walking to school in Milford Haven and walkers of the Coastal Path, which runs along the main road through Blackbridge).

193. Limited details have been provided of the proposed new and improved access road into the eastern side of the Blackbridge site, and its proposed use is unclear. The Applicant's Transport Assessment assumed there would be 2 vehicular accesses to the Blackbridge site, this access and one next to Castle Pill. However, at the hearing, Egnedol said the Castle Pill entrance would not be used. Thus the conclusions of the Transport Assessment cannot be relied upon. In the absence of clear proposals, the ability to satisfactorily deliver and control the site access arrangements has not been demonstrated, and it is not possible to discount a negative effect on highway safety. The B4325 is narrow, has poor geometry and lacks a footway over part of its length (250 metres).

194. Accessibility to the site on foot and by bicycle is poor and, unless this could be improved, people working on the site would be unlikely to use these modes of transport, even though it is close to Milford Haven. In addition, it has long been an

aspiration of the Council to provide a safer route for the section of Coastal Path that runs along the main road, and it has been suggested Egnedol could dedicate a route along the northern boundary of the Blackbridge site for this purpose. This would help to mitigate the effects of increased traffic along the B4325. At the hearing Egnedol offered to provide a permissive footpath but that would not secure a permanent facility. A fully dedicated public footpath would provide long-term assurance for the mitigation measure.

195. The timings of the improvements to the jetty and construction of the new access road are not clear, and heavy construction materials may have to be brought on to the site via the local road network (rather than by sea). Thus, one cannot have confidence in the conclusions reached in the Applicant's Transport Assessment for the construction phase.

196. Suitable planning conditions would go some way towards mitigating any adverse transportation effects. Without mitigation the scheme would have a moderate-major negative effect on highway and pedestrian safety. With mitigation provided by appropriate conditions the negative effects are considered to be minor.

***Pollution***

197. Emissions to air would be controlled by an Environmental Permit based on a feedstock of virgin timber and waste derived fuels, which would be controlled as those within Classes 1, 2 and 3 of the WRAP Classification Scheme to Define the Quality of Waste Derived Fuel. The cheese factory and transportation of fish, prawn and algae would have a potential for odours, and a scheme for odour control would have to be a requirement of a planning condition. There would also be potential for dust during the construction phase but that could be adequately controlled through the Construction Environmental Management Plan.

198. Surface water from the site would be either discharged to the Haven or used in the proposed horticultural units. Planning conditions would be needed to ensure the water was appropriately treated.

199. The site is previously developed land and, due to its history, some of it is contaminated with chemicals (some of which are carcinogenic). However, the assessment of contaminated land presented in the Environmental Statement is inadequate, and so risk to human health cannot be discounted. The shortcomings include: lack of certificates detailing past remediation carried out on part of the site; lack of data on borehole surveys, testing results and investigation plans; reference to inappropriate legislation; and failure to assess historical data for ground and chemical matters.

200. On general principles, the Applicant has failed to provide a comprehensive Conceptual Site Model. The preliminary version provided is inadequate and does not present a true reflection of the actual site conditions based on the historical data. Nor is there any consideration of the need for a site investigation prior to construction commencing to establish what should be included in the Construction Environmental Management Plan.

201. Finally, turning to noise, vibration and lighting, no sound power levels have been provided for the proposed construction plant, and full details of monitoring and mitigation measures would need to be specified in the Construction Environmental

Management Plan. In addition, no details of noise levels from plant and machinery during the operational phase have been provided, and it is difficult to comment on the Applicant's noise assessment without knowledge of the assumptions made. Rough assessment by the Council, based on certain assumptions, shows there may be potential for noise levels higher than background levels to be experienced at nearby residential properties at sensitive periods. A planning condition would be needed to ensure noise levels would be acceptable. Similarly, a planning condition would be needed in respect of any vibration levels and for approval of external lighting.

***Landscape and Visual Impacts***

202. The Applicant has carried out a Landscape and Visual Impact Assessment, identifying the character of the site as of low sensitivity due to its current derelict and former industrial use. The site does not fall within any nationally designated landscape areas, although the Pembrokeshire Coast National Park lies only 2 km to the south-west and 3.75 km to the west. The Wales Coastal Path runs alongside and crosses the proposed new access and pipeline route. Views into the site are primarily from 3 locations: from the public right of way immediately to the east; from the south side of the Haven; and from various locations on the edge of Milford Haven, particularly from Pill, The Rath and Hakin.

203. The LVIA has assessed the visual impacts from the latter viewpoints as of "moderate/minor" or "moderate" adverse significance and those from the opposite side of the Haven as "moderate/minor" or "minor" adverse significance, with all receptors being classed as "sensitive". The proposal includes some landscape works to help to mitigate and soften the visual impacts, whilst accepting that full screening could not be provided. Nevertheless, the Council considers there would be adverse effects.

204. The large greenhouses in the Blackbridge Eco Park would be in a prominent location on the headland and would involve the formation of 2 level platforms formed by a cut-and-fill excavation. The effect would be the creation of an alien landform perched on the edge of the natural cliff, which would run counter to the natural grain of the landform and be visually prominent. In nearby views from the edge of Milford Haven the greenhouses would appear as large scale horizontal lines and would break the skyline in some views. From the other side of the Haven the greenhouses would appear to be floating above the main complex of buildings at the Blackbridge site. Egnedol says the greenhouses would not be lit but it is not seen how that would be practical during winter months when daylight levels can be poor and days are short.

205. The main building complex at Blackbridge has the potential for significant visual impact when illuminated at night, and lighting would need to be minimised. In addition, the 60 m stack would be a prominent feature in the landscape, being both high and bulky (9.3 m in diameter). The ES says there would be no visible plume from the stack but this would largely depend on the moisture content of the feedstock. However, if biomass was brought from a variety of sources and varied in nature it may prove difficult to maintain consistency in its moisture content, and hence plumes may be seen.

206. Part of the proposed new access would be close to and crossed by the Coastal Path, and both the road and its effects on the woodland area would impact on that part of the landscape and on views from the Coastal Path. Finally, the proposed car park at

Waterston would involve removal of a length of hedgerow alongside the main road and would extend into the open countryside.

207. Whilst landscaping measures for the scheme as a whole could be secured by an appropriate planning condition and this would reduce its visual impact, the level of detail is such that it is not possible to confirm that the proposal would be compatible with the character and appearance of the area and would not be significantly detrimental to local amenity. Thus conflict with LDP policies GN.1 and GN.2 would be likely. In particular, despite mitigation measures, it is likely that the large greenhouses sited on the top of the cliff at Blackbridge would have a moderate/major negative effect on the landscape and visual amenity.

***Nature Conservation***

208. The Council's concerns are primarily in respect of bats but also extend to other protected species and to nearby designated conservation sites. The site is regularly used by commuting and foraging, hibernating, and roosting Greater Horseshoe and Lesser Horseshoe bats (GHS and LHS), and most activity is concentrated at the east end of the site around the blast wall and tunnels. However, the ES and HRA originally submitted do not fully acknowledge the potential for use as maternity roosts and for mating. Both are listed as Annexe ll species for which the Pembrokeshire Bat Sites and Bosherston Lakes SAC is designated. There are also noteworthy omissions in respect of other bat species.

209. The ES has other significant omissions, including the effects of vegetation clearance, construction works for new buildings and new access road, site lighting, noise and vibration from operation of the heavy plant proposed, the proximity of new buildings to roosts, and the movement of materials around the site. These would affect the use of roosts in the blast wall, tunnels and existing buildings, bat movement routes within the site and connectivity to other sites in the area, including several designated sites. The bat survey report also includes several statements that illustrate the Applicant's lack of consultation with Natural Resources Wales and the Council. As a whole, the ES and accompanying Survey Report fail to adequately assess the impact of the development on the bat population.

210. As an inevitable consequence, the proposed mitigation measures originally proposed were a cause for concern. Not only were they very limited, but it is impossible to assess the adequacy of mitigation measures without a proper assessment of the likely impacts on the bat species. In the absence of all of this information and with poor interpretation of the results of the survey, it was not possible to screen the proposal under Regulation 61 of the Conservation of Habitats and Species Regulations 2010 (as amended) or to determine if the proposals were in accordance with policy. This shortcoming could not be overcome by the use of planning conditions, as screening and any necessary appropriate assessment under the Habitats Regulations has to be carried out before any planning permission can be granted.

211. The further work carried out by Egnedol during the period of suspension sought to address a detailed list of concerns provided by NRW and the Council. However, the further environmental information submitted towards the end of that suspension has only been partially successful, and a number of concerns still remain. Firstly, there is no clear management plan for the vegetation in front of the tunnels and the proposed store building (Building 4), and there is no clear appreciation of the importance of the

stone arch and associated subterranean structures which provide important habitats for bats. The latter would be at risk of damage from the foundations of Building 4.

212. The proposed new access road would affect the woodland on the eastern edge of the Blackbridge site but the extent of woodland clearance required is unclear, as is the associated impact on the bat populations. There is also conflicting evidence on whether that access would be lit or not, with possible implications for use of the remaining woodland by bats. Indeed, the lighting scheme for the main site is also unclear on some details, including light spillage risks. Several bat houses have now been added as mitigation measures for lost bat roost facilities. However, as the effects of the development on some of the existing roosts have not been clearly defined, it is not clear what the bat houses are mitigation for.

213. The conservation significance of the site for bats is exceptionally high, and the impacts of the proposed development may have consequences for their favourable conservation status at a County and National level. Even though these bats are a feature of the Pembrokeshire Bat Sites and Bosherston Lakes SAC, the Applicant has repeatedly disregarded or underestimated the negative impacts likely to occur and has not demonstrated a proper understanding of how to take account of effects on such mobile species when assessing the implications for the associated SACs. Planning Policy Wales refers to species protected under European or UK legislation, and Technical Advice Note (TAN) 5, Nature Conservation and Planning, advises that, where protected species are present, the extent of any effects on them must be established before any planning permission is granted.

214. There are also a number of other designated European Sites in the area and, where species or habitat features might be affected, consideration needs to be given to the need for appropriate assessment under the Habitats Regulations. However, the ES originally submitted did not provide sufficient information to enable this to be done. Otters, grey seals and several fish species are features of the Pembrokeshire Marine SAC in the Haven waterway adjoining the site. However, the impacts on these were not properly considered, particularly in respect of: the potential of the lakes on the eastern edge of the Blackbridge site for otter breeding; the impact of the jetty works on otters, grey seals and fish species; and the impact of the under-bed drilled cable route for the grid connection on disturbed sea-bed habitat.

215. Again, the period of suspension gave Egnedol the opportunity to address these shortcomings. However, the further information now provided still fails to address several important matters. There is still uncertainty over the realignment of the watercourse used by otters on the eastern side of the Blackbridge site and over the associated mitigation measures. The development now also includes a permissive footpath along the edge of the site with a new swing bridge over Castle Pill on the western side of the site. Castle Pill is frequented by otters. However, no survey has been carried out for that area, no assessment of impact on the otters, and no proposals for mitigation measures. In addition, no impact assessment has been carried out for effects on the foreshore due to drainage, lighting and construction activities, including piling works to the jetty.

216. Taken as a whole, there is potential for impact on features of the Pembrokeshire Bat Sites and Bosherston Lakes SAC, the Limestone Coast of South-West Wales SAC, The Pembrokeshire Marine SAC, the West Wales Marine cSAC (Harbour Porpoise) and the

Skomer, Skokholm and Sea off Pembrokeshire SPA (seabirds). All of these need to be considered.

217. Whilst the recently submitted additional environmental information seeks to present the information needed to enable effects on the various SAC features to be assessed, there are still significant omissions. The shadow HRAs make no reference to the latest condition assessments of the various SACs even though that information was given to Egnedol. Clearly, such information should be taken into account when assessing the possible effects of the proposed development. There are also inconsistencies between the shadow HRA reports and the supporting environmental documents.

218. So far as the jetty is concerned, no plan for refurbishment has been provided and there are no structural survey details or drawings of the works proposed. In addition, no further information has been provided in respect of air quality dispersion modelling, although a number of questions were raised. More significantly, it is not clear how the West Wales Marine cSAC and the Skomer, Skokholm and Sea off Pembrokeshire SPA have been so readily screened out due to distance from the site when some of their key features are mobile species, which have not been adequately considered.

219. In conclusion, it is considered that there would be likely to be a major negative effect on nature conservation interests and conflict with LDP Policies GN.1 and GN.37. These major effects could not be adequately mitigated by planning conditions.

***Social and Economic Effects***

220. Pembrokeshire's economy has 3 main pillars: energy; agriculture; and tourism. The proposal would re-use a derelict, previously developed site within the Haven Waterway Enterprise Zone and adjacent to a hydrocarbon energy industry complex, which is a COMAH site. It is understood the proposal has been planned to complement that use. It would produce green energy that would contribute towards achieving national climate change targets and would add to the renewable energy projects that are being attracted to Pembrokeshire. The scheme would fit into the Council's economic development strategy, and the combination of locally produced energy and heat would be an attraction for other potential inward investors.

221. Construction jobs would benefit local engineering companies, some of whom have been hard hit by the closure of the Murco refinery in 2015, and the creation of permanent jobs would support local employment in a part of the County with higher than average unemployment. The range of jobs would suit people of varying skills and abilities, and the use of sea transport would assist the Milford Haven Port Authority and associated companies to continue to grow. The availability of these new jobs would reduce the tendency for skilled and able people to leave the County and help to counter the outward migration of younger people from the County.

222. The proposal would be innovative insofar as some of the technology appears to be untried at the scale proposed, and that would introduce a degree of risk in terms of the feasibility of the project and its full implementation. However, it has the potential to have a moderate-major positive economic impact on the area and, in this respect, would be in accordance with the strategic objectives of the LDP.

***Other Local Effects***

223. Finally, it is appropriate to comment on several other matters. There are no nearby registered historic environment assets, and a programme of archaeological work could be conditioned to look at the possible interests associated with the underground magazine stores and buildings of the former RNAD complex. Reliance is placed on the advice of the Health and Safety Executive in respect of the adjoining COMAH sites.

**Matters not in Dispute amongst the Main Parties**

224. There are a number of matters on which there is general agreement amongst the main parties (the Applicant, NRW and PCC). Firstly, it is acknowledged that the scheme would provide low-carbon renewable energy in support of the Welsh Government's Energy Policy Statement of 2010 which defined the move to low-carbon energy production as one of its 3 main aims. The virgin biomass feedstock would be sourced from a combination of sustainably managed overseas plantations and local supplies of forestry brash, which would comply with Department of Energy and Climate Change criteria for sustainability. In these respects the proposal would comply in principle with adopted Local Development Plan Policy GN.4 on Resource Efficiency and Renewable and Low-carbon Energy Proposals.

225. It is also agreed that the development would bring valuable socio-economic benefits to the area. It would use a previously developed site that is currently derelict and earmarked in the LDP for "port and energy related development" and would bring investment and jobs into the local economy, which has suffered from the closure of several energy related plants in recent years. With the loss of jobs the age profile of the local population has become skewed as younger people have left to find work, and the development would help to relieve that loss, as it would provide exciting local employment opportunities for a wide range of people.

226. Initial concerns about the potential for pollution of the Haven by drainage discharges from the site have been allayed, and the parties agree that, subject to appropriate controls, construction and operational noise levels would not be such as to affect the amenity of the local communities. It is also accepted that the risks of air pollution or odour affecting local communities would be insignificant, and the permit required under the Environmental Permitting Regulations would provide further assurance on this.

227. The site has been subject to considerable contamination in the past and, although extensive remedial works have already been carried out and certified, there remains some risk of further isolated pollution being encountered. There may also be archaeological remains of its former use as a Royal Navy Armaments Depot. It is agreed that both of these risks could be adequately managed by suitable planning conditions. No other archaeological or cultural heritage issues have been raised.

**Appraisal of Main Issues**

228. The main issues of disagreement amongst the main parties are in relation to impacts on ecology, landscape and visual amenity, the siting of some units in open countryside, and on traffic and highway safety.

***Ecology***

BATS

229. On the original submissions both NRW and PCC were critical of Egnedol's assessments of impacts and appropriate mitigation measures in respect of bats and otters. The Blackbridge site is used by several species of bats, including the Greater Horseshoe and Lesser Horseshoe bats which are European Protected Species, and the site lies within range of 2 SACs for which they are designated features: the Pembrokeshire Bat Sites and Bosherston Lakes SAC and the Limestone Coast of South-West Wales SAC. The favourable conservation status of these SACs is linked to the bats' use of the application site.

230. It is common ground amongst the parties that the proposed development would have a significant impact on the bat species, which use the derelict buildings, disused armament storage tunnels, the stone arch and its associated subterranean voids, and the surrounding woodland and vegetation for roosts, foraging and traffic corridors. Although Egnedol's initial appreciation of these features was considered inadequate, the 6 months period of suspension enabled it to carry out additional survey work, make a better assessment of the implications of the proposed scheme and design a series of mitigation and compensation measures. The latter includes: the maintenance and enhancement of vegetated flight corridors; the protection of vegetation buffers for screening of the tunnels and stone arch entrances; the avoidance of interference with the subterranean feature; the avoidance of tree roosts for the new access road route; a lighting strategy that avoids intrusive effects and overspill of light; and roost facilities to compensate for those lost due to refurbishment and reuse of the disused buildings. Details of these would be secured by appropriate planning conditions, including conditions for a Construction Environmental Management Plan (CEMP) and a long-term Ecological Management Plan (EMP).

231. On the basis of this additional environmental information and the control measures, NRW now advises that the impact on bats would be broadly acceptable. PCC has continued to air some concerns about management of the vegetation, protection of the subterranean structures, the impact of the new access road and on details of the lighting scheme. However, I consider these are now adequately covered by the Applicant's most recent work and could be satisfactorily ensured by suitable planning conditions and the Environmental and Ecological Management Plans.

OTTERS

232. The position concerning otters is broadly similar. Otters are European Protected Species and a feature of the adjacent Pembrokeshire Marine SAC; they frequent the foreshore, stream and small lakes on the eastern edge of the Blackbridge site. Without mitigation measures, the development would be likely to have a significant effect on otter travel along the stream and on their use of the lakes and adjoining woodland for roosting and foraging. The original ES was deficient in addressing these matters. However, the additional environmental information submitted at the end of the period of suspension is much improved.

233. It has provided information on improvements to the culvert and watercourse, on vegetation protection around the roost and foraging areas, on the alignment of the new access and its effects on the woodland near the lakes, on lighting proposals near the stream and culvert and on barge landing areas on the foreshore. Whilst the submitted Ecological Management Plan does not yet include all of these, it could be readily amended to ensure adequate safeguards were put in place.

234. The Applicant's late offer to provide a permissive public footpath between the edge of Milford Haven and the Coastal Path to the east of the Blackbridge site, allowing walkers to avoid the dangerous B4325 main road, would introduce potential for further conflict with otters using Castle Pill as the derelict swing bridge there would have to be replaced. However, that could be constructed without directly affecting the foreshore, and the effects of construction could be adequately controlled by amendment of the CEMP.

235. On the basis of the various mitigation measures now proposed and the safeguards provided by means of the CEMP and the long-term EMP, NRW advises that its concerns for otters could be overcome. PCC is unsure about the details of the proposed stream realignment and mitigation measures as well as the impact of the minor works in Castle Pill. However, I consider the proposed mitigation measures, including those to be secured through the CEMP and EMP, would provide adequate safeguards to ensure the development would not significantly affect the otter population.

MARINE

236. The adjacent waters are part of the Pembrokeshire Marine SAC which is designated for the presence of 8 marine habitats and 7 Annex II species (i.e. Annex II of the Habitats Regulations, denoting species of high conservation importance justifying the SAC designation). Other marine SACs further afield may also be affected, particularly where their qualifying features are mobile and may use the Haven waterway near the application site. The original ES was deficient in its consideration of possible impacts on these marine features, and considerably more environmental information was provided at the end of the period of suspension. However, NRW has remained critical of the survey and assessment work carried out by Egnedol.

237. The marine environment is at risk of impacts due to repair works on the jetty (including noise and disturbance from piling work), the construction of 2 dolphin moorings, the use of barges to deliver construction machinery, equipment and materials, and the use of ships to deliver biomass material during the operational phase of the development. These have potential to affect some of both the habitat features and the species features.

238. With respect to habitat features, Egnedol submits that the areas affected would be very small compared with the overall extent of the SAC and that the small areas of seabed likely to be affected do not include any notable flora or fauna or any priority habitat. However, NRW say the drop-down camera video survey was not fit for purpose and did not provide a clear picture of the nature of the habitat affected. I agree with NRW on this; the quality of the pictures provided is very poor and it is not possible to identify the flora and fauna present in the habitat. Consequently, the nature and quality of the habitat cannot be defined, and it is not possible to assess its importance as part of the mosaic of habitat types that make up the diversity of the habitat feature affected. Whilst the construction area may be small in comparison with the large area of the SAC and it is likely the overall effects may be very small, the significance of the habitat loss cannot be properly assessed without more detailed knowledge of its nature and content. The evidence submitted is insufficient.

239. Turning to mammals and fish species, Egnedol submits that construction activities would be unlikely to have any significant effect due to the short-term nature of the work, controls over noise generation (for the jetty piling works), and general

construction methodology controls. This may well be the case, particularly if any piling work were only carried out under low tide conditions to maximise the attenuation of noise. However, NRW criticises the reliance placed on possible effects on the grey seal, which is acknowledged as being more sensitive to noise than the other feature species, even though harbour porpoise are known to respond strongly to the noise of piling at substantial distances (as much as 20-25 km). Harbour porpoise is a key feature of the West Wales Marine cSAC which has a conservation objective in connection with noise disturbance, and it seems this has not been properly considered.

240. NRW also advises that impacts on mobile species, such as seal and harbour porpoise, should be assessed in the context of marine SACs over a much wider area (the Marine Mammal Management Unit area) and that Egnedol has not done that. I agree with NRW and consider that to be a further deficiency in the submitted impact analysis.

241. NRW further argues that the noise assessment has not taken into account mammal and fish species that are more sensitive to different ranges of sound frequency. Whilst that may be desirable for completeness, I consider it entirely reasonable to concentrate the assessment on species likely to be most sensitive to the sound range generated by piling work, which is predominantly of low frequency. However, having said that, the assessment should encompass sound level thresholds for behavioural change as well as injury, and the submitted environmental information does not adequately include that.

242. In conclusion, whilst I consider the construction works would be unlikely to have a significant effect on the feature species of the marine SACs, in view of the shortcomings identified above, it is not possible to completely discount it (in the context of a Habitats Regulations Assessment).

243. As to shipping movements (construction barges and long-term biomass deliveries), these would be negligible when compared with the large number of vessel movements that take place in the Haven waterway. I consider their impact can be discounted.

HABITATS REGULATIONS ASSESSMENT

244. Drawing this topic to a conclusion, Egnedol has provided most of the information needed to enable the Competent Authority to carry out the necessary Habitats Regulations Assessment (under Regulation 61) if it were minded to grant planning permission. However, as described above, I consider some of the information and assessment to be inadequate, and no justification has been put forward in respect of Stages 3 and 4 of the HRA process.

245. The Applicant has identified 9 SACs and SPAs within 15 km of the application site and has screened out 6 of them, leaving only the Limestone Coast of South West Wales SAC, the Pembrokeshire Bat Sites and Bosherston Lakes SAC and the Pembrokeshire Marine SAC as requiring Stage 2 Appropriate Assessment. In view of my conclusions above in respect of mobile marine species, the other marine SACs should not be so readily screened out. However, a more detailed (Stage 2) assessment would not be possible as these features have not been adequately covered in the additional environmental information.

***Landscape and Visual Amenity (and Open Countryside Areas)***

246. The Applicant has carried out a Landscape and Visual Impact Assessment (LVIA) following best practice guidance. It has assessed the effects on the landscape character of the site itself as being "moderate/minor" and "minor/negligible" on the wider landscape context. Bearing in mind that most of the Blackbridge part of the site is brownfield land containing a range of large derelict buildings and features of its former use as an armaments depot and that most of the Waterston part of the site is land that used to be part of a large oil refinery, this broad assessment is not in dispute.

247. So far as visual impact is concerned, the LVIA concludes that the most noticeable visual impact would be from the nearest edge of Milford Haven, particularly in views from The Rath and the Pill area on the opposite side of Castle Pill. It assesses these impacts as "moderate/minor adverse" or "moderate adverse". I consider that to be a reasonable assessment for the visual impact of the main part of the Blackbridge site, i.e. that part on the water's edge which has been subject to previous development. However, it underestimates the visual impact of the proposed greenhouses.

248. The 2 greenhouses would be of substantial size and prominently located on the headland, which is currently open green fields. Construction would involve the formation of 2 large level terraces using cut-and-fill techniques, which would create an alien landform on the edge of the natural cliff. It is proposed that the greenhouses would be partially screened by landscaping measures and would not have any lighting, though the practicality of that during winter months is open to question. However, whether or not they were lit, I share the Council's view that they would appear prominent and alien in that location, particularly as the landform would also be radically altered. I consider they would be unacceptably harmful to the character and appearance of the area, which away from the coast is predominantly open countryside.

249. Turning to the Waterston part of the site, some of the proposed development would be outside the former refinery site on land on the opposite side of Hazelbeach Road. Buildings 24 and 25, the packaging facility and the cheese factory, would be on open land currently used as a car park and play area, and a large car park would be constructed on an open field on the northern side of the village, involving the removal of a length of hedgerow to provide an entrance from the main road. Whilst the benefits of providing this car park have been explained, its location would erode the development boundary and be detrimental to the rural character and appearance of that approach to the village.

250. Both the greenhouses and the development at Waterston north of Hazelbeach Road would be contrary to LDP policies SP 3 and GN.5 (land not allocated for employment use), Policy SP 13 (outside settlement boundary) and Policy SP 16 (in the countryside). The greenhouses and car park would also conflict with the general and sustainability criteria of LDP policies GN.1 and GN.2 on account of their locations on open fields and visual impacts on the character and appearance of the area.

### *Traffic and Highway Safety*

251. The final main issue in dispute concerns the additional traffic that would be generated by the proposed development and the arrangements for site access. Although it is proposed that most construction equipment, plant and materials would be brought to the site by barge, the scheme would still generate increased traffic along the B4325, particularly for construction personnel and in the long-term operational staff working on the 2 parts of the site. The B4325 is narrow, has poor geometry and

lacks a footway along part of its length and, despite the intentions to implement Construction and Operational Traffic Management Plans, would be subject to increased risks to traffic and pedestrian safety.

252. The Applicant's proposal to make provision for a footway over Castle Pill and round the northern boundary of the Blackbridge site would make a positive contribution towards pedestrian safety, particularly for walkers following the Coastal Path. However, there is inconsistency between the Transport Assessment and Egnedol's intentions as described at the hearing for vehicular access arrangements to the Blackbridge site. The former was based on use of the present access alongside Castle Pill for traffic approaching from the Milford Haven direction (an arrangement to which local residents on that route are strongly opposed) and use of the new access road for traffic from other directions. However, at the hearing Egnedol said the Castle Pill entrance would not be used except in an emergency.

253. The Council advises in its Local Impact Report that, subject to the various safeguards built into the Construction and Operational Traffic Management Plans and into suitable planning conditions, the effect of the scheme on highway safety would be minor. That conclusion was based, of course, on the Applicant's Transport Assessment, which is now not consistent with the latest proposals. The latter would result in additional traffic travelling along part of the B4325 between the 2 site entrances. In view of this inconsistency the Transport Assessment cannot be relied upon, and increased risks to highway safety cannot be discounted.

**Other Matters**

254. Whilst the matters above represent the main issues in dispute amongst the main parties, several third parties have raised other matters. Firstly, they question the expertise of the Applicant to design and operate a plant of this sort, and they claim that there is no similar gasification plant operating successfully in this Country or anywhere else in the World. Such claims are misleading. The gasification process is well established technology that has been in use worldwide for several decades.

255. The safety of the gasification process has been raised and whether it would be sensible to locate such a process close to 2 other COMAH installations. However, no evidence has been put forward to show the process would be unsafe and, in any case, NRW would not grant it an environmental permit unless it was confident it could be operated safely and represented the best technology available. I have no concerns on this matter.

256. The sustainability of sourcing most of the biomass feedstock from overseas has been questioned, and it is asserted that its transportation over such large distances would not be sustainable. It is also claimed that biomass is as unsustainable as any other fossil fuel as it takes decades for new trees to grow, and reference has been made to 2 Chatham House reports (The Royal Institute of International Affairs) which it is reported conclude that national and international policy support for biomass energy is based on incorrect assumptions of its carbon neutrality.

257. Considering these matters in turn, long distance transportation is not necessarily unsustainable, and a much wider range of considerations need to be taken into account. The claim that biomass is as unsustainable as any other fossil fuel is a clear exaggeration as the replacement tree growth takes several years rather than several

million years. And finally, another third party has advised that the 2 Chatham House reports referred to are controversial amongst international experts on climate change and do not represent an objective view of the current state of knowledge on the climate effects of bio-energy.

258. On matters of principle, objectors also argue that the development would not comply with the Well-Being of Future Generations (Wales) Act 2015 (the WBFG Act) and would conflict in particular with Goals 1 and 7, a prosperous Wales and a globally responsible Wales. They argue that the emissions would contribute towards global warming, that there could be no guarantee that the timber would be sourced from a sustainable supply, and that it would not make a positive contribution towards global well-being.

259. I share those doubts about global responsibility, as it would be very difficult to ensure that all future biomass supplies were sustainably sourced and that the localities of those sources were not harmed by the removal of trees with no compensatory replanting. However, the scheme has the potential to bring substantial benefits to the local economy and to the local market for jobs, which would support other well-being goals that have been particularly identified as being important to the people of Pembrokeshire. On balance, these would far outweigh any other well-being factors.

260. Some objectors have expressed the view that the risks of this scheme, and its various unproven ancillary elements, are too great for it to be allowed on a strategic employment site, as it may prove to be unviable, and the opportunities afforded by such a key site would have been wasted. Clearly that argument accepts the principle that the site should be redeveloped for employment use. However, it has been derelict for many years and, although there may be some economic risks, the scheme would also provide an opportunity for major benefits to the area. It should not be discounted on the argument that something better might come along.

261. Finally, several local residents have expressed concern about risks of air pollution and noise. Some say that the top of the 60 metres tall flue stack would be close to and at a similar level to nearby houses and are dubious about the air dispersion modelling carried out by the Applicant. However, that modelling took full account of the local terrain and allowed for very conservative assumptions but still concluded that levels of pollutants would be very low. I have no reason to doubt its results. As to noise, the studies have indicated that general noise levels during both construction and long-term operation, with possible short-term exceptions such as the piling work, would not be much higher than existing background noise levels. Again, I have no reason to doubt these results.

262. This is an appropriate point to mention that, during the period of suspension, 3 letters were received from third party representatives (Documents D2.1-D2.3) expressing comments on the procedures for examination of the application. The procedures for Developments of National Significance fall outside the scope of my appointment, and I have had no regard to them.

## Conditions

263. A partial set of suggested conditions was submitted by the Council in its Local Impact Report (Document C2) and, at the Inspector's request, this was supplemented by additional information on further ecological conditions (Document C4). In addition, at the hearing the Council submitted a suggested condition in relation to a footpath

(Document C9). These and several other suggested conditions were discussed at the hearings.

264. At the end of the period of suspension the main parties were invited to comment on the draft ecological conditions put forward by the Council (as these were not discussed at the aborted hearing on ecological matters). Comments were submitted by both the Applicant and NRW (Documents D23 and D25 respectively).

265. In addition to the standard conditions on commencement of development and listing of the approved plans, it was agreed that conditions would be needed to cover a Staff Travel Plan (STP), a Construction Traffic Management Plan (CTMP), an Operational Traffic Management Plan (OTMP), and Infrastructure Improvements (as proposed by the Council) in order to reduce the risks of unacceptable levels of highway safety and amenity. However, the CTMP condition should also include provision for the jetty refurbishment (though it is not part of the current application) and construction of the proposed new access road to be carried out prior to any other development so that they would provide the main means of access for all other construction work. The infrastructure improvements would comprise safety measures on the B4325 between Waterston and Blackbridge and the provision of a new public right of way through the site so that Coastal Path users could avoid walking along the B4325, where there is no separate footway. The Applicant has offered a permissive footpath, whilst the Council's suggested condition is for it to be a dedicated public footpath. In order to secure the long-term benefits, I consider the condition should specify the latter.

266. A local resident also suggested a condition should be imposed to severely limit any use of the present site access via Castle Hall Road (near to Castle Pill). However, that could be adequately covered under the CTMP, OTMP and STP conditions as the proposed development includes very little use of that access. The Council suggested a condition to control the nature of the biomass fuel to be used. However, as such a condition would duplicate similar controls that would be applied in any environmental permit, it is not necessary.

267. It was agreed that the conditions suggested by the Council on a Construction Environmental Management Plan, odour abatement (for the food related activities at the Waterston Eco-Park), and operational noise control would be appropriate to reduce risks of pollution. Conditions would also be needed to address the risks of pollution due to contaminated land, and it was agreed that the suite of conditions in NRW's representations (REP4 in Document C1) would be more appropriate than those suggested by the Council.

268. The conditions suggested by the Council on landscaping and external materials were considered to be necessary and reasonable, though a further condition specifying replanting in the event of failure to establish any plants was also agreed to be necessary. The suggested conditions on drainage, development near watercourses, archaeology and limitations of retail operations at the Waterston Eco-Park were also agreed to be necessary, though a "watching brief" archaeology condition would be preferred.

269. Turning to conditions on ecological matters, I have reviewed those originally suggested by the Council in the light of the additional environmental information submitted during the period of suspension and the comments of the Applicant and NRW. The Council had suggested conditions on an Ecological Design Strategy, a

Landscape Ecological Management Plan and a Construction Biodiversity Management Plan. These matters would now be better covered by specific conditions for measures to safeguard bats and otters and by conditions for a Construction Environmental Management Plan and a longer-term Ecological Management Plan (to deal with landscape habitat provision and management).

270. Although a lighting scheme has now been put forward and would be broadly acceptable, a simple condition for a detailed lighting strategy would still be needed and, as suggested by the Applicant, could usefully include provision for a post-construction review. A condition has been suggested concerning an EPS licence but, as this is covered by other legislation, it is unnecessary.

271. The Council also suggested conditions on bio-security, monitoring to confirm the effectiveness of mitigation measures and further surveys if construction start was delayed. These are not needed as the matters would be adequately covered by conditions for a CEMP and a longer-term EMP and by the controls applicable to an EPS licence. NRW has suggested a condition requiring submission of a construction GANT chart (i.e. a programme of the construction work). However, the ecological measures referred to by NRW could be readily included in other conditions.

272. Finally, the Applicant has put forward possible conditions referring to noise impact from the marine piling and marine pollution prevention. However, other than in respect of Environmental Impact Assessment, the marine works would be outside the scope of the current DNS application and would be subject to a separate marine permit. Thus conditions would not be appropriate on these matters.

273. In conclusion, I have amended several of the suggested conditions for improved clarity, removed those considered unnecessary and added other necessary conditions, and the recommended set is now included as an Annex to this report.

**Summary of Conclusions**

274. I have concluded above that the environmental information submitted on ecological matters is not sufficient to enable Habitats Regulations Assessment to be carried out in respect of all SAC designated habitats and protected species features. Whilst the information now presented provides confidence that impacts on bats and otters could be mitigated and compensated for so that their favourable conservation status in respect of the associated SACs would be unlikely to be affected, the same conclusion cannot be reached in respect of certain marine habitats and species for which various marine SACs have been designated.

275. There are shortcomings in the data submitted and in the assessment of possible effects on the habitats and species features of the Pembrokeshire Marine SAC, which is adjacent to the application site and would be directly affected by the marine works associated with the application scheme. In addition, insufficient consideration has been given to possible effects on mobile species associated with other marine SACs, particularly the grey seal which is a feature of the West Wales Marine cSAC and for which noise disturbance is a particular conservation objective. Although common sense indicates that significant impacts would be unlikely, it is not possible to discount it with the degree of confidence needed for an assessment under Regulation 61 of the Habitats Regulations.

276. It might be suggested that further environmental information should have been sought from the Applicant to address these identified shortcomings. However, that initiative was taken earlier in 2017 and involved a period of 6 months suspension of the DNS timetable. Egnedol have been given ample opportunity to ensure the additional environmental information subsequently submitted was adequate. It is not appropriate to further delay consideration of the application.

277. Turning to other matters, I have also reached the conclusion that some elements of the proposal, which would be constructed in open countryside, would be detrimental to the character and appearance of the area and contrary to development plan policy. The most striking features are the large greenhouses that would be prominently located on the headland high above the area of previously developed land at the Blackbridge site. Their construction would involve the formation of 2 extensive terrace areas using cut-and-fill techniques which would create an alien landform. I consider that they would be unacceptably harmful to the character and appearance of the area in a prominent location readily seen from large parts of Milford Haven.

278. At Waterston, the proposal includes the construction of several eco-park units and a car park outside the settlement area which would encroach on open countryside to the detriment of its rural character and appearance. These and the greenhouses above would be contrary to development plan policy.

279. The final matter at issue amongst the main parties is traffic and highway safety, as there are inconsistencies between the Transport Assessment submitted and the Applicant's latest proposal for day to day access to the site. This would be likely to lead to increased traffic along part of the B4325 main road in comparison with that allowed for in the Transport Assessment. Whilst not a reason for refusal in its own right, this reinforces my conclusions on the other main issues.

280. There is a measure of agreement amongst the main parties on all other issues, and it is generally agreed that the scheme would be acceptable on these matters provided it was controlled by appropriate conditions. Interested third parties have raised a number of other matters but, as explained above, these do not materially affect my conclusions.

281. Overall my conclusion is that the proposed scheme would be unacceptably harmful to the character and appearance of the area, particularly in respect of the large, elevated greenhouses proposed on terraces constructed on the headland overlooking Milford Haven, that inconsistencies between the Transport Assessment and the scheme now proposed raises doubts about risks to highway safety on the B4325 main road, and that, due to shortcomings in the environmental assessments, the potential for significant impacts on important features of nearby marine Special Areas of Conservation cannot be discounted. As planning permission cannot be granted if the Competent Authority is unable to carry out the assessment required under the Habitats Regulations, my conclusion has to be that permission should not be granted.

282. In reaching my conclusions I have taken into consideration the Environmental Statement and all of the additional environmental information submitted by the Applicant.

283. I have also considered the duty to improve the economic, social, environmental and cultural well-being of Wales, in accordance with the sustainable development principle,

under section 3 of the Well-Being of Future Generations (Wales) Act 2015 ("the WBFG Act"). In reaching my conclusions I have taken into account the ways of working set out in section 5 of the WBFG Act and I consider that these conclusions are in accordance with the sustainable development principle through their contribution towards one or more of the Welsh Ministers' well-being objectives set out as required by section 8 of the WBFG Act.

**Recommendation**

284. I recommend that planning permission be refused for both the main application and the secondary applications.

*Clive Nield*

Inspector

## APPEARANCES

Public Open Forum

FOR THE APPLICANT:

| | |
|---|---|
| Mr Steve Whitehouse | Director, Egnedol Wales Limited. |

INTERESTED PERSONS:

| | |
|---|---|
| Cllr Guy Woodham | Local Councillor. |
| Mr John Clarke | Local Resident. |
| Mr Bernard Brown | Representing Llanstadwell Community Council. |
| Mr Mark Davies | Local Resident. |
| Mr Brian Ball | Local Resident. |
| Mr David Burgoyne | Local Resident. |
| Mr Phillip Howe | Local Resident. |
| Mr John O'Keefe | Local Resident. |
| Mrs Shelagh O'Keefe | Local Resident. |
| Dr Rebecca Cadbury | Representing Pembrokeshire Friends of the Earth and Biofuelwatch. |
| Ms Bettina Bekka | Ditto. |
| Mr Charlie Mason | Pembrokeshire Resident and Community Councillor, and representing Mr Christopher Jessop (Pembrokeshire Resident). |
| Mr David Robinson | Local Resident. |
| Mr Blaise Bullimore | Pembrokeshire Resident. |

1st Hearing: Protected Species and Special Areas of Conservation

FOR THE APPLICANT:

| | |
|---|---|
| Mr Steve Whitehouse | Director, Egnedol Wales Limited. |
| Mr Geoff Liles, BSc (Ecol) | The Otter Consultancy. |
| Mr Jonathon Goodrick, BSc, MCIM | Senior Ecologist, Access Ecology. |
| Mr Jonathon Moore, BSc, MSc, MCIM | Senior Ecologist, Access Ecology. |
| Mr Richard Crompton, BSc, CEng, FLSoc | Ecology Consultant (bats). |

FOR PEMBROKESHIRE COUNTY COUNCIL:

| | |
|---|---|
| Mr Mike Simmons, BSc(Hon), DipTP, DipUD, MRTPI | Development Manager - Major Projects, Pembrokeshire County Council. |
| Ms Lara Lawrie, BSc(Hon), MSc | Planning Ecologist, Pembrokeshire CC. |
| Mr Steve Benger, BSc | Highways Development Control, PCC. |

FOR NATURAL RESOURCES WALES:

| | |
|---|---|
| Ms Louise Edwards, BA(Hon) | Senior Development Planning Adviser, NRW. |
| Ms Sandra Wells, BSc, MSc, MCIM | Senior Species Officer, NRW. |
| Mr John Messenger, BSc | Senior Species Officer, NRW. |
| Ms Lily Pauls, BSc, PhD | Senior Marine Conservation Officer, NRW. |
| Mr Huw Williams, BSc(Hon) | Conservation Technical Specialist (SACs & Habitats Regulations), NRW. |

INTERESTED PERSONS:

| | |
|---|---|
| Mr Mark Davies | Local Resident. |

2nd Hearing: Safety and Amenity Matters and Conditions

FOR THE APPLICANT:

| | |
|---|---|
| Mr Steve Whitehouse | Director, Egnedol Wales Limited. |
| Mr Dan Simons | Project Manager, Egnedol. |
| Mr Jeff Troake, BSc(Hon), MSc, CMILT, MRTPI, MTPS | WSP Parsons Brinkerhoff. |

FOR PEMBROKESHIRE COUNTY COUNCIL:

| | |
|---|---|
| Mr Mike Simmons, BSc(Hon), DipTP, DipUD, MRTPI | Development Manager – Major Projects, Pembrokeshire County Council. |
| Ms Lara Lawrie, BSc(Hon), MSc | Planning Ecologist, Pembrokeshire CC. |
| Mr Steve Benger, BSc | Highways Development Control, PCC. |
| Mr Raymond Greenwood, BA, MA, MCILT, MCIHT, TPP | Transport Planner, Pembrokeshire CC. |
| Mr Matt Clowd, MIPRWM | Definite Map Officer, Pembrokeshire CC. |
| Mr Richard Staden, BA, DipLA, MLI | Landscape Officer, Pembrokeshire CC. |
| Ms Rachel Thomas, MGeolSc, FGS, MIES | Contaminated Land Inspector, Pembrokeshire CC |
| Mr Nathan Miles, MSc | Pollution Control Officer, Pembrokeshire CC. |

FOR NATURAL RESOURCES WALES:

| | |
|---|---|
| Ms Louise Edwards, BA(Hon) | Senior Development Planning Adviser, NRW. |

INTERESTED PERSONS:

| | |
|---|---|
| Mr Mark Davies | Local Resident. |
| Mr David Robertson | Local Resident. |
| Mr Robbie Daley | Local Resident. |

## DOCUMENTS

### Original Application

| | |
|---|---|
| A1 | Application Forms dated July 2016 (First Application). |
| A2 | Notification, Consultation and Publicity Notices. |
| A3 | Design and Access Statement, July 2016. |
| A4 | Environmental Statement, dated July 2016. |
| A5 | ES Non-Technical Summary, dated July 2016. |
| A6.1-6.12 | ES Volume 3 – Appendices: |
| | Appendix 3.1 - Scoping Request and Response. |
| | Appendix 3.2 - Historical Assessment Reports (3 folders). |
| | Appendix 3.3 - Groundsure Reports. |
| | Appendix 3.4 - Groundsure Historical Maps. |
| | Appendix 3.5 - Visual Impact Appendices. |
| | Appendix 3.6 - Noise Monitoring Results and Calibration Certificate. |
| | Appendix 3.7 - Feedstock Codes. |
| | Appendix 3.8 - Archaeological Appendices. |
| | Appendix 3.9 - Ecology Appendices. |
| | Appendix 3.10 - Traffic and Transportation. |
| | Appendix 3.11 - Jetty. |
| | Appendix 3.12 - HDD Grid Connection. |
| A7 | Habitats Regulations Assessment, July 2016. |
| A8 | Pre-Application Consultation Report, June 2016 – now superseded. |

### Current Application

| | |
|---|---|
| B1 | Environmental Statement, dated November 2016. |
| B2 | ES Non-Technical Summary, dated November 2016. |
| B3 | Aerial Photograph of Area with site(s) shaded white. |

B4 Bat Survey Report 2015-2016, Revision C, dated November 2016 (replacing Bat Survey Report, July 2016, in ES Appendix 3.9).

B5 Pre-Application Consultation Report, June 2016 amended to November 2016.

**Post Application (and pre Suspension)**

C1 Consultation responses: Objections, Support and Other Representations, February 2017.

C2 Local Impact Report by Pembrokeshire County Council, dated 1 February 2017.

C3 Egnedol Response to Inspector's written questions, 14 March 2017.

C4 Council's response to Inspector's request for suggested ecological conditions, 8 March 2017.

C5 Egnedol response to matters raised in consultation submissions from Dragon LNG and FOE/Biofuelwatch.

C6 Egnedol's Hearing Statement.

C7 NRW's Hearing Statement.

C8 Extract from draft Ecological Management Plan detailing maximum numbers of bats surveyed in each building, submitted by Egnedol at 1st Hearing.

C9 Suggested Condition in relation to footpath, submitted by Council at 2nd Hearing, and subsequent email confirming corrected footpath number.

**Post Suspension of Examination**

D1 Letter from NRW confirming list of additional matters to be considered by Egnedol, following meeting NRW/Egnedol on 27 April 2017.

D2.1-D2.3 Correspondence, dated 8 May 2017 and 2 June 2017, from Mr Mason, representing The Environmental Network for Pembrokeshire (TENP), and 2 May 2017 from Ms Becker of Pembrokeshire Friends of the Earth.

D3 Planning Hearing Addendum Report, dated July 2017, submitted by Egnedol.

| | |
|---|---|
| D4 | Bat Survey Report 2015-16, Appendix VII, Summer Nocturnal Roost Surveys, October 2016 – submitted by Egnedol. |
| D5 | Bat Activity Survey Report – Addendum 2017 – submitted by Egnedol. |
| D6 | Photographs of Blast Wall – submitted by Egnedol. |
| D7 | Exterior Lighting Assessment, June 2017 – submitted by Egnedol. |
| D8 | Template Method Statement to be used within a Bat Development Licence Application, dated 21/06/2017 (Shadow EPS Licence Application to accompany the planning application) – submitted by Egnedol. |
| D9 | Otter Survey Report, July 2016 – submitted by Egnedol. |
| D10 | Follow-up Otter Surveys & Mitigation Report, July 2017 – submitted by Egnedol. |
| D11 | Proposed New Road into Site: Otter Surveys & Mitigation Report, June 2017 – submitted by Egnedol. |
| D12 | Badger Survey, June 2017 – submitted by Egnedol. |
| D13 | Marine Environmental Impact Assessment, 16 June 2017 – submitted by Egnedol (including Annex of Image Stills Analysis). |
| D14 | Shadow Habitats Regulations Assessment (sHRA), Marine Sites, by Baker Consultants – submitted by Egnedol. |
| D15 | Habitats Regulations Assessment, July 2017 – submitted by Egnedol. |
| D16 | Ecological Management Plan, July 2017 – submitted by Egnedol. |
| D17 | GANT Chart for Project – submitted by Egnedol. |
| D18 | Folder of Consultation Letters sent out to Interested Third Parties by PINS on 28 July 2017. |
| D19 | PCC Comments on the Additional Information submitted by Egnedol, dated 8 Sep 2017. |
| D20 | NRW Comments on the Additional Information submitted by Egnedol, dated 8 September 2017. |

D21.1-D21.3 Other Third Party Comments on the Additional Information submitted by Egnedol: Ann Clarke (31 Aug 2017); FJ Clarke (1 Sep 2017); and Shelagh O'Keeffe (8 Sep 2017).

D22 Egnedol Response to NRW Comments on the Additional Information submitted by Egnedol, dated 29 September 2017.

D23 Egnedol Comments on ecological conditions, dated 13 October 2017.

D24.1-D24.2 PCC Final comments on Egnedol's submission of 29 September 2017, dated 18 and 20 October 2017.

D25 NRW Final Comments on Egnedol's submission of 29 September 2017, dated 20 October 2017.

**PLANS**

A1-A59 ES Volume 2 - Original Application Plans – 59 No. (See list with application letter, dated 26 July 2016).

A1 EGW-01-001 Rev A: Masterplan

A2 EGW-01-002 Rev A: Blackbridge Eco Park.

A3 EGW-01-003 Rev A: BtEf – Biomass Facility.

A4 EGW-01-004: Waterston Eco park.

A5 EGW-01-005: Existing 11 kV Locations.

A6 EGW-01-006: Existing Gas Mains.

A7 EGW-01-007: Existing Surface Water and Foul Drainage.

A8 EGW-01-008: Existing Water Main.

A9 EGW-01-009 Rev A: Ecology – Environmental Considerations.

A10 EGW-01-010: Waterston Existing Electricity Lines.

A11 EGW-01-011: Waterston Existing Low Pressure Gas Main.

A12 EGW-01-012: Waterston Existing Foul Sewer.

A13 EGW-01-013: Waterston Existing Water Main.

A14 EGW-01- 014 Rev A: Proposed 11 kV Cables.

A15 EGW-01-015 Rev A: Proposed Gas Mains.

A16 EGW-01-016 Rev A: Proposed Water Main.

A17 EGW-01-017 Rev A: Proposed Foul Drainage – Waterston.

A18 EGW-01-018 Rev A: Proposed Surface Water Drainage – Waterston.

A19 EGW-01-019 Rev A: Proposed New Potable Water – Waterston.

A20 EGW-01-020 Rev A: Proposed New Surface and Foul Drainage.

A21 EGW-01-021: Proposed Electricity Supply – Waterston.

A22 EGW-01-022: Upgraded Road – Blackbridge Site.

A23 EGW-01-023: Upgraded Junctions – Waterston Site.

A24 EGW-01-024: Grid Connection Routes.

A25 EGW-01-025: Jetty Frames – Existing.

A26 EGW-01-026: Bathymetric Data of Directional Drilling.

A27 EGW-01-027: New Fence Line – Waterston.

A28 EGW-01-028: New Entrance – Waterston.

A29 EGW-01-029: Jetty Cross Section with Conveyor.

A30 EGW-01-030: Site Development Areas.

A31 EGW-01-031: New Car Park – Waterston.

A32 EGW-01-032: New Car Park – Waterston (2).

A33 EGW-01-033: Phase 1 Habitat Map.

A34 EGW-01-034: Jetty Frames – Proposed.

A35 EGW-01-035: Conveyor Route.

A36 EGW-01-036: Existing Road Network.

A37 EGW-01-037: Designated Conservation Areas.

A38 EGW-01-038: Badger Sett Locations.

A39 EGW-01-039: Locations of the Four Distinct Areas.

A40 EGW-01-041: DNS and Secondary Consent Boundary.

A41 HG-15-07-PO1 Rev A: Aquaculture Units 21 Elevation.

A42 HG-15-07-PO2: Aquaculture Units 22 Elevation.

A43 HG-15-07-PO3: Cheese Factory Elevation.

A44 HG-15-07-PO4: Control Building Elevation.

A45 HG-15-07-PO6: Pyroliser and Grinding Hall Existing Elevation.

A46 HG-15-07-PO7: Pyroliser and Grinding Hall Proposed Elevation.

A47 HG-15-07-PO8: Storage Building Elevation.

A48 HG-15-07-PO9: Dryer Hall Elevation.

A49 HG-15-07-P10: Engine House Elevation.

A50 HG-15-07-P11: Exhaust Gas Condition and Algae Propagation Elevation.

A51 HG-15-07-P12: Algae Building Elevations.

A52 HG-15-07-P13: Greenhouse Structures Elevation.

A53 HG-15-07-P14: MV Room Elevation.

A54 HG-15-07-P15: Cold Ironing Building Elevation.

A55 AP-15-07-P16: Packaging Facility Elevation.

A56 LSS-01-001: Blackbridge Existing Contours.

A57 LSS-01-002: Blackbridge Proposed Contours.

A58 LSS-01-003: Waterston Existing Contours.

A59 LSS-01-004: Waterston Proposed Contours.

B1-B3 Replacement Plans, EGW-01-001 Rev C, 002 Rev C & 003 Rev C.

B37 Replacement Plan, EGW-01-037 Rev A.

B60 New Plan, EGW-01-051 Chimney Stack GA.

D1-D42 Further plans submitted as part of Additional Information in July 2017:

D1 Replacement Plan EGW-01-001 Rev D: Master Plan.

D2 EGW-01-052: Proposed Permissive Footpath.

D3 EGW-01-054: Pre-Construction Management Areas.

D4 EGW-01-055: Reptile Translocation Areas.

D5 EGW-01-056: Ecological Mitigation Plan.

D6 EGW-01-057: Culvert Mitigation Plan.

D7 EGW-01-061: Location of Artificial Badger Sett.

D8 EGW-01-066: Maternity Roost Mitigation – Bat House Elevations.

D9 EGW-01-079: Algae Plateau Cross–Sections, Drawing 1 of 3.

D10 EGW-01-080: Algae Plateau Cross-Sections, Drawing 2 of 3.

D11 EGW-01-081: Algae Plateau Cross-Sections, Drawing 3 of 3.

D12 EGW-01-082: Greenhouse Plateau Cross-Sections, Drawing 1 of 3

D13 EGW-01-083: Greenhouse Plateau Cross-Sections, Drawing 2 of 3

D14 EGW-01-084: Greenhouse Plateau Cross-Sections, Drawing 3 of 3

D15 EGW-01-085: Transformer Yard Cross-Sections.

D16 EGW-01-086: Storage Building Cross-Sections.

D17 EGW-01-087: Road Cross-Sections, Drawing 1 of 3.

D18 EGW-01-088: Road Cross-Sections, Drawing 2 of 3.

D19 EGW-01-089: Road Cross-Sections, Drawing 3 of 3.

D20 EGW-01-090: Road Long Section.

D21 EGW-01-091: Proposed Barge Landing Area.

D22 EGW-01-092: Building 4 Lighting Contours.

D23 EGW-01-093: Section Location Plan.

D24 EGW-01-094: Conveyor Storage to Dryer.

D25 EGW-01-095: Conveyor for Residue.

D26 EGW-01-096: Access Road Location.

D27 EGW-01-097: Fencing Plan.

D28 EGW-01-098: Building 4 Constraints Plan.

D29 EGW-01-099: Pre-Construction Management Area 4.

D30 EGW-01-100: Pipework Locations and GA.

D31 EGW-01-101: Storage Building and Retaining Wall Section.

D32 EGW-01-102: Reservoir Access Track and Silt Trap.

D33 EGW-01-103: Reptile Herptile Fencing Locations.

D34 EGW-01-067: Maternity Roost Mitigation – Bat House Layout.

D35 EGW-01-068: Maternity Roost Mitigation – Bat House Sections.

D36 EGW-01-069: Ecological Management Areas.

D37 EGW-01-070: Day/Night Roost Design – Incinerator Building.

D38 EGW-01-071: Day/Night Roost Design – Sea Front Bat House.

D39 EGW-01-074 Rev A: Bat Houses, Building Mitigation, Proposed Hedgerows and Vegetation Buffer Zones.

D40 EGW-01-076 Rev D: Trial Pit Locations and Results.

D41 EGW-01-077: Conveyor Schematic.

D42 EGW-01-078: Existing Building and Tunnel References.

## Annex A – Schedule of Recommended Conditions

Conditions to be attached to planning permission for the development:

1. The development shall begin not later than five years from the date of this decision.

2. The development shall be carried out in accordance with the approved plans as detailed in the List of Plans, with the exception of Plans EGW-01-001 Rev A and EGW-01-001 Rev C which have been superseded by EGW-01-001 Rev D, Plan EGW-01-002 Rev A which has been superseded by EGW-01-002 Rev C, Plan EGW-01-003 Rev A which have been superseded by EGW-01-003 Rev C, and Plan EGW-01-037 which has been superseded by EGW-01-037 Rev A.

3. Construction Traffic Management Plan

   Prior to the commencement of development, a Construction Traffic Management Plan (CTMP), including details of how the site is to be accessed during construction and how site accommodation and storage is to be provided, shall be submitted to and approved in writing by the Local Planning Authority. This shall include provision for access using the jetty to be made available and construction of the proposed new access road to be carried out prior to any other development. The CTMP shall be implemented in accordance with the approved details.

4. Operational Traffic Management Plan

   Prior to the first operation of the development, an Operational Traffic Management Plan (OTMP) shall be submitted to and approved in writing by the Local Planning Authority. It shall include the timing of transport movements, including the loading and unloading of goods and feedstock. The OTMP shall be implemented in accordance with the approved details.

5. Staff Travel Plan

   Prior to the first operation of the development, a Staff Travel Plan (STP) shall be submitted to and approved in writing by the Local Planning Authority. The STP shall be implemented in accordance with the approved details and shall continue to be implemented and developed thereafter in accordance with the approved details.

6. Prior to the commencement of development, details of proposed road safety improvements to the B4325 between Waterston and Blackbridge shall be submitted to and approved in writing by the Local Planning Authority. The improvements shall be implemented in their entirety in accordance with the approved details before any other development is commenced.

7. Prior to the first operation of the development, a scheme for the creation of a dedicated public footpath from the existing public footpath No. PP51/52 (Pembrokeshire Coastal Path and Wales Coastal Path) that crosses the site and connecting into the existing footpath network west of Castle Pill via a bridge over Castle Pill shall be fully implemented in accordance with details to be submitted to and approved in writing by the Local Planning Authority. This shall include confirmation of dedication as a public footpath (by reason of creation of an agreement under Section 25 of the Highways Act 1980).

8. Public Right of Way No. PP51/22 (Pembrokeshire Coastal Path and Wales Coastal Path) shall be kept open for public use unless and until an order under Section 257 of the Town and Country Planning Act 1990 for the diversion of the right of way has been made and confirmed in writing by the Local Planning Authority.

9. Construction Environmental Management Plan

   Prior to the commencement of development, a Construction Environmental Management Plan (CEMP) shall be submitted to and approved in writing by the Local Planning Authority. It shall include details of:
   - any external lighting for construction purposes;
   - working hours;
   - any phasing of construction works;
   - pollution control measures (including noise and dust mitigation and wheel washing facilities);
   - a surface water management plan;
   - a waste management plan to deal with all waste generated during the construction phase; the plan shall include how waste generated will be treated, recycled and/or disposed of;
   - any piling operations, including working hours and assessment of noise levels at nearby receptors.

   The CEMP shall be implemented as approved.

10. Odour Abatement

    Prior to the first operation of the development, details of odour abatement measures in respect of the Waterston Eco-Park shall be submitted to and approved in writing by the Local Planning Authority. The operation of the development shall be in accord with the approved details in all respects.

11. Operational Noise Control

    Prior to the first operation of the development, a detailed noise mitigation scheme shall be submitted to and approved in writing by the Local Planning Authority. The noise mitigation scheme shall include a methodology for the submission and approval by the Local Planning Authority of regular noise monitoring reports and proposed mitigation. The operation of the development shall be in accord with the approved details in all respects.

    Contaminated Land

12. Prior to commenced of the approved development (or such other date or stage in development as may be agreed in writing with the Local Planning Authority), the following components of a scheme to deal with the risks associated with contamination of the site shall each be submitted to and approved in writing by the Local Planning Authority:

    (1) a preliminary risk assessment, which has identified:
    - all previous uses;
    - potential contaminants associated with those uses;
    - a conceptual model of the site indicating sources, pathways and receptors;
    - potentially unacceptable risks arising from contamination at the site;

(2) a site investigation scheme, based on (1) above, to provide information for a detailed assessment of the risk to all receptors that may be affected, including those off site;

(3) the site investigation results and the detailed risk assessment and, based on these, an options appraisal and remediation strategy giving full details of the remediation measures required and how they are to be undertaken;

(4) a verification plan providing details of the data that will be collected in order to demonstrate that the works set out in (3) above are complete and identifying any requirements for longer-term monitoring of pollutant linkages, maintenance and arrangements for contingency action.

13. Prior to occupation of any part of the permitted development, a verification report demonstrating completion of the works set out in the approved remediation strategy and the effectiveness of the remediation shall be submitted to and approved in writing by the Local Planning Authority. The report shall include the results of sampling and monitoring carried out in accordance with the approved verification plan to demonstrate that the site remediation criteria have been met. It shall also include any plan (a "long-term monitoring and maintenance plan") for longer-term monitoring of pollutant linkages, maintenance and arrangements for contingency action, as identified in the verification plan, and for the reporting of this to the Local Planning Authority.

14. Reports on monitoring, maintenance and any contingency action carried out in accordance with a long-term monitoring and maintenance plan for contaminated land shall be submitted to the Local Planning Authority as set out in that plan. On completion of the monitoring programme a final report demonstrating that all long-term site remediation criteria have been met shall be submitted to and approved in writing by the Local Planning Authority.

15. If, during development, contamination not previously identified is found to be present at the site then no further development (unless otherwise agreed in writing with the Local Planning Authority) shall be carried out until the developer has submitted, and obtained written approval from the Local Planning Authority for, an amendment to the remediation strategy detailing how this unexpected contamination shall be dealt with.

Landscaping

16. Prior to the commencement of development, details of both hard and soft landscape works shall be submitted to and approved in writing by the Local Planning Authority, and these works shall be carried out as approved. These details shall include:

(i) a statement setting out the design and mitigation objectives and how these will be delivered;

(ii) existing and proposed finished levels and contours;

(iii) means of enclosure and retaining structures;

(iv) vehicle and pedestrian access and circulation areas.

Soft landscape works shall include: planting plans; written specifications (including cultivation and other operations associated with plant and grass establishment); schedules of plants noting species, plant supply sizes and proposed numbers/densities

where appropriate; and an implementation programme (including phasing of work where relevant).

17. All planting, seeding or turfing comprised in the approved details of landscaping shall be carried out in the first planting and seeding seasons following the occupation of the buildings or the completion of the development, whichever is the sooner. Any trees or plants which within a period of 5 years from the completion of the development die, are removed or become seriously damaged or diseased shall be replaced in the next planting season with others of similar size and species.

18. External materials

    Prior to the construction of any building (and stack) hereby approved, details of the materials to be used in the construction of the external surfaces of that building (and stack) shall be submitted to and approved in writing by the Local Planning Authority. Development shall be carried out in accordance with the approved details.

    Drainage

19. Prior to the commencement of development a surface water drainage plan shall be submitted to and approved in writing by the Local Planning Authority. The development shall be carried out in accordance with the approved details.

20. Prior to the commencement of development a scheme for the disposal of foul sewage shall be submitted to and approved by the Local Planning Authority. The scheme shall be implemented in accordance with the approved details prior to the first operation of the development.

21. No structure shall be built over ordinary watercourses or within 3 metres of the top of the bank of any watercourse, or within 3 metres of a culverted watercourse, without the prior written approval of the Local Planning Authority.

22. Archaeology

    No development shall commence until the Local Planning Authority has been informed in writing of the name of a professionally qualified archaeologist who is to be present during the undertaking of any excavations in the development area so that a watching brief can be conducted. No work shall commence until the Local Planning Authority has confirmed in writing that the proposed archaeologist is suitable. A copy of the watching brief report shall be submitted to the Local Planning Authority within two months of the archaeological fieldwork being completed.

23. Retail

    Prior to the commencement of development, details of the extent of any retail use shall be submitted to and approved in writing by the Local Planning Authority. The operation of the development shall thereafter be in accordance with the approved details.

24. Bat Mitigation

No development shall commence until an appropriate scheme of bat mitigation has been submitted to and approved in writing by the Local Planning Authority. This should include but not be limited to:

(i) The provision of compensatory roosts away from buildings where noise and vibration is likely to be an issue (e.g. the pyrolyser building/buildings 1 and 2);

(ii) Details of the refurbishment of tunnel entrances;

(iii) Implementation of a minimum 12m vegetation buffer along the western elevation of storage building 4, and that this is secured from public access by means of 2.8m palisade fence, to act as a buffer to the blast wall; and

(iv) An appropriate scheme of long-term habitat management across the site (cross referenced to and part of any Ecological Management Plan).

The scheme shall be implemented as approved.

25. Otter Mitigation

No development shall commence until appropriate measures are in place for the protection of otters so that they can continue to use both Castle Pill and the Blackbridge foreshore during both the construction and operational phases of the development. They shall include those measures set out in the otter surveys report and include the following:

(i) Daytime working hours are to be adopted for any construction works, to commence no earlier than one hour after sunrise and finish no later than one hour before dusk; at night a quiet dark corridor is to be retained along the watercourse and its bankside vegetation;

(ii) Construction materials are to be stored well away from the watercourse and in a way that prevents otters gaining access to them or using them to rest in (e.g. pipe ends to be capped or covered);

(iii) Any trenches left open overnight are to have planks of wood placed at regular intervals to allow otters a way out;

(iv) All tools, food, litter and construction materials and packaging that may constitute a hazard to otters are to be removed from the site daily; and

(v) Any areas that may be suitable for use by otters are to be checked by a suitably qualified, experienced and licensed ecologist immediately prior to works commencing.

26. Lighting Strategy

No development shall commence until a lighting strategy, to include details of any floodlighting, external lighting and external light spill from buildings, has been submitted to, and approved in writing by, the Local Planning Authority. The development shall be carried out and retained in accordance with the approved lighting strategy. There shall be no other external illumination other than that forming part of the approved lighting strategy.

27. Construction Environmental Management Plan

No development shall commence until a Construction Environmental Management Plan (CEMP) has been submitted to, and approved in writing by, the Local Planning Authority. The CEMP shall be implemented as approved.

28. Ecological Management Plan

Prior to the commencement of development an Ecological Management Plan (EMP) shall be submitted to, and approved in writing by, the Local Planning Authority. The EMP shall be implemented as approved and should include the following matters:

(i) Detailed proposals for vegetation retention, clearance and creation in front of each of the tunnels and the stone arch, around building 9, and between buildings 9 and 16, to include scaled drawings to show the existing and proposed situations;

(ii) Description of habitat types to be created, management prescriptions to support the development of those habitats and management prescriptions for their maintenance when the habitats meet the desired condition;

(iii) Detail of the frequency for the submission of written monitoring reports and the content of those monitoring reports;

(iv) Arrangements for any remedial action identified by the monitoring reports; and

(v) Detail of the organisation(s) responsible for the long-term management and monitoring of the site and of the legal and funding mechanism by which the long-term implementation of the EMP will be secured.