



Penderfyniad ar yr Apêl

Ymchwiliad a gynhaliwyd ar 18-21 a
25-28/05/10, a 12-15 a 19-20/10/10
Ymweliadau â safle a wnaed ar 12 a 21/10/10

gan **John Woolcock BNatRes(Hons)**
MURP DipLaw MPIA MRTPI

Arolygydd a benodir gan Weinidogion Cymru

Dyddiad: 14/12/10

Appeal Decision

Inquiry held on 18-21 and 25-28/05/10, and
12-15 and 19-20/10/10

Site visits made on 12 and 21/10/10

by **John Woolcock BNatRes(Hons)**
MURP DipLaw MPIA MRTPI

an Inspector appointed by the Welsh
Ministers

Date: 14/12/10

Appeal Ref: APP/B6855/A/09/2111230

Site address: King's Dock, Swansea SA1 8QT

<p>The Welsh Ministers have transferred the authority to decide this appeal to me as the appointed Inspector.</p>
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- The appeal is made under section 78 of the Town and Country Planning Act 1990 against a refusal to grant planning permission.
 - The appeal is made by Dingle Holdings Limited against the decision of the City and County of Swansea Council.
 - The application No:2007/2684, dated 27 November 2007, was refused by notice dated 2 April 2009.
 - The development proposed is construction of a biomass fired combined heat and power plant together with ancillary works including access road, car parking, landscaping etc.
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Application for costs

1. At the Inquiry an application for costs was made by Dingle Holdings Limited against the City and County of Swansea Council. This application is the subject of a separate Decision.

Decision

2. I dismiss the appeal.

Preliminary matters

3. A list of abbreviations used below is included on the last two pages of this decision.
 4. The Council considered a revised scheme from that originally submitted with the application. The revised scheme increased the height of the proposed stack from 60 m to 70 m. It is the scheme shown on Drawing No.5748(P) 02G that I have used in my consideration of the appeal.
 5. Notwithstanding the description of the proposed development on the application form, the Council describes the proposal as the erection of a biomass fired combined heat and power (CHP) plant with ancillary offices, workshops, heat rejection building, car parking, landscaping and infrastructure requirements. The Council and the appellant agreed at the Inquiry that this is a more specific description, and I have dealt with the appeal on this basis. For brevity, I refer to the proposal as the 'power station' in this decision.
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6. The application was accompanied by an Environmental Statement (ES). The ES was produced in accordance with the Town and Country Planning (Environmental Impact Assessment) (England and Wales) Regulations 1999 (EIA Regulations). The objectors to the proposed development raised concerns before and during the Inquiry about a lack of specificity on certain matters in the ES. However, no submissions at the Pre-Inquiry Meetings sought further information under EIA Regulation 19. Coedbach Action Team (CAT) withdrew some of its criticisms about the ES at the Inquiry. Having regard to the judgment in *R. (Blewett) v Derbyshire CC*, I am satisfied that the ES reasonably complies with the provisions of Schedule 4 of the EIA Regulations.¹ There is no basis here to conclude that the ES is so deficient that it could not reasonably be described as an Environmental Statement as defined by the EIA Regulations. I have taken into account the Environmental Information in determining the appeal.
7. The ES includes photomontages of the proposed building, but these were not adopted by the appellant's landscape witness. The appellant indicated at the Inquiry that the photomontages should be disregarded. I have not, therefore, taken them into account in determining this appeal. To assist my site inspection, I requested cross-sections of the proposed development from part of SA1 Swansea Waterfront (SA1SW)², and from outside the observatory on the promenade at Swansea Bay.³
8. Matters not in dispute between the Council and the appellant, and which they consider could be satisfactorily dealt with by condition, are set out in the Statement of Common Ground (SoCG) as follows:⁴
 - Ground conditions and hydrology.
 - Noise and vibration.
 - Air quality, other than perceived risk to health and associated social and economic impacts.
 - Traffic, transport, pedestrians and cyclists.
 - Ecology and nature conservation.
 - Surface water environment and flood risk.

¹ *R. (Blewett) v Derbyshire CC* [2004] Env L.R. 29.

² In this decision the redevelopment area SA1 Swansea Waterfront is abbreviated to SA1SW to distinguish it from SA1 Residents' Action Group, which is abbreviated to SA1.

³ Cross-sections at Document A17 and Council's comments at Document C15.

⁴ SoCG - Document 1.

Main issues

9. I consider the main issues in this appeal to be:

- (a) The effects of the proposed development on the character and appearance of the area, having regard to policies for the proper planning of the locality.
- (b) The effects of the proposed development on the living conditions of nearby residents, and on other land uses and activities in the locality, with particular reference to the impact on outlook, pollution, noise and disturbance.
- (c) The effects of the proposed development on ecology and the nature conservation interests of designated sites.
- (d) The compatibility of the proposal with national and local policy in respect of the generation of energy from renewable sources.

I have also considered whether the benefits of the scheme would be sufficient to outweigh any harm that might be caused.

The appeal site ⁵

10. The appeal site comprises 10.51 ha of land located on a promontory between King's Dock and Queen's Dock, which lie to the south of the Prince of Wales Dock. It is located approximately 315 m from the eastern end of SA1SW, approximately 560 m from the residential communities in Port Tennant/St Thomas and 1.1 km from the eastern end of residential development at Swansea Point/Maritime Quarter. The site lies approximately 500 m from the western end of Crymlyn Bog, which is a Special Area of Conservation (SAC), and about 1 km from the reopened Tir John landfill site, which is adjacent to the SAC.

The proposed development ⁶

11. The proposed building would include storage areas, a power/process area, combustion area, along with an ash collection area, control room/gallery, staff amenities area and offices, and would have a total floor area of 44,130 m². The main building would be approximately 390 m long and 77 m wide for 42 m of its length, and between 110 m and 114 m wide for the remainder of the building. The ash collection area and offices would increase the width to approximately 153 m for some 20 m of its length. With the exception of the control rooms at roof level, circular and semi-circular features some 23 m high, the main building would be 18 m high for approximately 260 m of its length. The remainder of the roof would also be 18 m high, except for the southern half of the building, towards its western end, which would curve up from approximately 20 m high to a maximum height of 31 m above the boiler. The roof would comprise, throughout, standing seam aluminium. A circular emissions flue or stack would be attached to the south-western side of the main building and would be approximately 70 m high with a

⁵ Based on matters agreed in the SoCG - Document 1.

⁶ Unless otherwise stated the description of the proposal is from the SoCG and plans.

diameter of 5 m. The ES states that plumes would be visible intermittently subject to climatic conditions.⁷

12. Site infrastructure would also include a 600 m² sub-station, a 600 m² workshop and a 5,000 m² heat rejection plant located towards the western side of the main building. A total of 121 visitor and staff car parking spaces are proposed. Vehicular access to the site would be via the existing security controlled access points to the Port complex off the A483 Fabian Way. I saw at my site visit an existing, but disused, rail line into the appeal site.
13. The proposed plant would have a maximum designed generating capacity of marginally less than 50 MWe so as to enable the development to be determined under planning legislation, in preference to proceeding by way of Section 36 of the Electricity Act 1989.⁸ It would be operated some 2-3 MWe below the maximum capacity, and be fitted with a boiler with a rated input of 150 MWt, producing a thermal output of around 130 MWt. It would operate continuously and have a design life of 25 years. The appellant considers that the proposal would generate enough electricity for 80,000 households and 85 MWt of residual heat, which might be available for a district heating network.⁹
14. It was clarified at the Inquiry that the proposed plant would, with the exception of any hydrocarbon fuels used for the start up of boilers and standby generators, only use clean wood biomass fuel.¹⁰ The appellant also suggested a condition that, unless otherwise agreed by the Council, 75% of the biomass fuel would be imported by ship, with the remaining 25% sourced within 161 km of the site and transported to the site by rail.¹¹ The plant would consume between 900-1,400 tonnes of fuel per day, or 328,000-511,000 tonnes per year.

Planning policy

15. I am required to decide this appeal having regard to the development plan, and to make my determination in accordance with it, unless material considerations indicate otherwise. The development plan for the area includes the City and County of Swansea Unitary Development Plan (UDP), which was adopted in November 2008.¹²
16. The spatial strategy set out in the UDP includes capitalising on the redevelopment opportunities afforded by brownfield land and the Waterfront area. This reflects the Welsh Assembly Government's (WAG) vision for the regeneration of Swansea Waterfront. The UDP strategy adds that in line with the recommendations of the Wales Spatial Plan *People, Places, Futures* (WSP), any future proposals for the redevelopment of such a significant brownfield waterfront and coastal area will be considered with the benefit of a waterfront regeneration masterplan for the wider

⁷ ES paragraph 7.1.2, and Document A8. The appellant's expert's evidence is that plume visibility is dependent upon particle size, reflectivity and lighting; that plumes should not occur due to particles, NO₂ or moisture, but on rare occasions under certain conditions a plume might be visible.

⁸ Benson Watkins' letter dated 19 February 2010, in response to clarification sought by Inspector.

⁹ Document A19 paragraph 36 and Peter Walker's Proof of Evidence paragraph 3.24.

¹⁰ Document A7.

¹¹ The SoCG adds that approximately 15% of the fuel may be transported by HGV in an emergency situation.

¹² Document CD20.

Swansea Bay area, prepared on a joint basis between adjoining authorities and relevant partners to provide an overarching development framework for the area. The Inquiry was advised that no such masterplan has been adopted by the Council, that work on it was on-going, and that this had been used for considering Convergence funding.¹³ The WSP identifies Swansea as a key settlement of national importance, where a key priority is implementing the Waterfront masterplan to maximise opportunities along the stunning coastline. The City's proximity to an outstanding waterfront, its backdrop of the Welsh valleys, along with one of the foremost UK research-led universities, are cited in the WSP as key advantages.¹⁴

17. The Council and the appellant agree that the two most relevant UDP policies are AS12 and R11. The appeal site lies within an area to which Policy AS12 applies, and this states:

"Development proposals that enhance the viability of the port, extend the use of the ferry terminal facilities and increase employment and business opportunities will be permitted provided that such proposals are compatible with adjacent development areas, communities, environmental enhancement schemes, and safeguard the potential canal route corridor."

The supporting text provides that increasing commercial docks activity will be supported where development has suitable regard to issues of amenity, land use compatibility and environmental impact. It adds that future development of the port and docks will be an important consideration in the proposed waterfront regeneration masterplan for the wider Swansea Bay region, cited above.¹⁵

18. The area subject to UDP Policy AS12 abuts, to the north, SA1SW, to which UDP Policy EC2 applies. This area is identified for major redevelopment for mixed employment and residential development together with supporting leisure, tourism, community uses and ancillary services. The supporting text states that SA1SW comprises approximately 40 ha of former dockland on the eastside of the City, which is rapidly being transformed into a prestigious and regionally significant mixed use development, fundamentally changing the image of the eastern approach to the City.

19. The UDP, in this regard, cites the robust and comprehensive policy context set out in the Supplementary Planning Guidance *Port Tawe and Swansea Docks*, which was adopted in September 2002 (SPG).¹⁶ The supporting text to the UDP adds that this guidance has been augmented by an outline planning consent and a Design and Development Framework. This has now been further augmented by the variation of some of the conditions of the outline planning consent, including a revised land use masterplan for SA1SW.¹⁷ Part of the appeal site is identified on the Land Use Proposals plan in the SPG as a potential road/rail interchange facility, with the eastern part of the appeal site partly within an area annotated "Potential for Freeport Designation", and the remainder of the appeal site identified for dock related development.

¹³ UDP Part 1. C. Spatial Strategy (xi), (xii) and (xiii), and Richard Jones in response to a question from Inspector.

¹⁴ Document CD17.

¹⁵ UDP paragraph 5.3.51.

¹⁶ Document CD21.

¹⁷ Document C13.

20. The general employment land allocated in UDP Policy EC1 includes 34 ha within the Docks. Two parcels of this land lie to the north of the area that is subject to Policy AS12, with a third located to the east of the appeal site, and within the Policy AS12 designation. The supporting text notes that the Docks make an important contribution to the industrial infrastructure of the City, and that the remaining operational docks and general industrial side of the port provides opportunities for B1, B2 and B8 uses. It adds that revitalisation of significant brownfield sites in this coastal location should be delivered with the benefit of the masterplan for the wider Swansea Bay area cited above.¹⁸
21. UDP Policy R11 permits proposals for the provision of renewable energy (RE) resources, subject to certain provisos, including:
- (i) The social, economic or environmental benefits of the scheme in meeting local, and national energy targets outweigh any adverse impacts.
 - (ii) The scale, form, design, appearance and cumulative impacts of the proposal can be satisfactorily incorporated into the landscape, seascape or built environment and would not significantly adversely affect the visual amenity, local environment or recreational/tourist use of these areas.
 - (iii) There would be no significant adverse effect on local amenity, highways, aircraft operations or telecommunications, or on:
 - (iv) Natural heritage and the historic environment.
- The policy also requires adequate information on possible environmental effects and measures to secure removal of plant following cessation of the operation.
22. The amplification of Policy R11 refers to considerations such as noise and visual intrusion. The supporting text also refers to the Council's *Sustainable Energy Action Plan*, which identifies action required locally to reduce the use of fossil fuels, but does not duplicate other existing plans.¹⁹ Its strategic objectives include developing Swansea's use of green heat and increasing locally generated electricity from renewable sources. One of the 17 types of action listed is a plan to build a biomass power plant, subject to a successful planning application and a PPC permit.²⁰ The Council acknowledged at the Inquiry that this is a reference to the appeal scheme.
23. Many other UDP policies have been brought to my attention, and I deal with these where relevant in my decision.
24. *Planning Policy Wales*, July 2010, (PPW) sets out the land use planning policies of the WAG. Its key policy objectives include tackling the causes of climate change by moving towards a low carbon economy, by facilitating development that reduces emissions of greenhouse gases (GHG) in a sustainable manner, provides for RE at all scales, and contributes to the protection and improvement of the environment. PPW also states that all forms of RE, which fit within a sustainable development framework, should be facilitated. Positive provision should be made by ensuring that development control decisions are consistent with national and international climate change obligations, including contributions to RE targets, recognising the environmental, economic and social opportunities that RE can make to wider planning goals and objectives, whilst avoiding inappropriate development with

¹⁸ UDP paragraph 2.3.4 (5).

¹⁹ Appendix 6 in Appendices for Statement of Evidence of Richard Jones.

²⁰ Pollution Prevention and Control Permit (PPC) - now an Environmental Permit (EP) under the Environmental Permitting (England and Wales) Regulations 2010.

respect to designated areas, and ensuring that potential detrimental effects on local communities are minimised. Technical Advice Note 8: *Planning for Renewable Energy* (TAN8) supplements the policy set out in PPW.

Reasons

Character and appearance

Landscape context

25. The appeal site lies within Character Area 38 – Swansea Bay in the Countryside Council for Wales (CCW) National Character Assessment.²¹ The landscape is dominated by the City of Swansea and nearby coalescing towns. In terms of cultural landscape the assessment adds that the Port Talbot coastline is heavily influenced by industrial development, but elsewhere former areas of heavy industry have been cleared, decontaminated and redeveloped. It refers to SA1SW in the eastern side of the City, where former docklands are providing land for office, hotel, retail and residential development. Under the heading visual and sensory landscape the assessment refers to residential areas complemented by major industrial installations such as Port Talbot steelworks and docks, Baglan Energy Park and Swansea Docks. It adds that being located upon a predominantly flat, coastal plain the buildings and industrial structures appear in stark relief and can be seen for considerable distances.
26. CCW LANDMAP, which is cited in PPW, identifies more detailed Visual and Sensory Aspect Areas, but the Swansea Bay Aspect Area excludes the Docks. However, the Lowland/Coastal/Intertidal area either side of the Docks has high (coastal views) scenic quality. The Margam Sands/Aberavon Sands Aspect Area further to the east is also of high scenic quality. The Docks area including SA1SW, and the appeal site, are included within Aspect Area SA1 under Cultural Landscape in LANDMAP. The overall evaluation for this area states that it is outstanding as a regenerative programme designed to reflect the status of Swansea as the second city of Wales, and as a centre for inward investment and quality.
27. Current land use and operational development within the Docks includes a hardcore waste transfer station, warehousing, cement importing, process and distribution centre and buildings for the manufacture of fertilizer. Tall lighting towers and cranes within the Docks are visible vertical elements in the waterfront landscape. There is a ferryport in the Docks with services to Cork in Ireland. There are also plans to commence a foot passenger service to Ilfracombe.
28. It was evident from my site visits that the Docks lie within the broad sweep of Swansea Bay, but they appear to project into the bay forward of the natural coastline, presumably because they are constructed on reclaimed land. This makes the King's and Queen's Docks particularly prominent and exposed in views of this coastal landscape. However, the outer sea wall of Queen's Dock is a narrow low-lying strip of land designed for conduits to serve the former BP oil refinery at Llandarcy. The impression from many vantage points is that the promontory between King's and Queen's Docks, of which the appeal site is the major part, defines the transition between land and sea in this part of the City.

²¹ Draft 30-3-2010 in Appendix 2 of Stephen Knott's Proof of Evidence.

Landscape character

29. The appellant revisited the landscape and visual assessment in the ES to take into account the increase in stack height from 60 m to 70 m.²² The assessment in the ES divided the landscape within an area up to 3 km from the appeal site into six Local Character Zones (LCZ), which are considered below. The LCZs generally represent areas of defined landscape with a particular identity; however, I highlight other specific aspects where relevant. I agree with the appellant that more distant LCZs would be unlikely to be adversely affected by the proposal, but consider more distant views in the next section. The assessment, based on the *Guidelines for Landscape and Visual Impact Assessment* (GLVIA), involves analysis of the character and quality of the existing landscape, along with the magnitude of change likely to result from the proposed development, and sensitivity, to evaluate significance. In assessing the magnitude of change, the ES states that the biomass power station would be a substantial development extending to 480 m in length and up to 30 m high at roof level, and so would have a large mass, scale and vertical presence accentuated by the stack.²³
30. LCZ1 includes the operational docks, along with industrial and commercial areas to the north of the docks. It also encompasses part of Fabian Way, which is the eastern approach to the City, and the park and ride car park. The working docks area is characterised by activity and structures associated with shipping, loading and storage. The Council is concerned about lighting at night-time required for the proposed plant. However, parts of the docks are already floodlit. Subject to appropriate conditions additional lighting, including aviation safety lighting for the stack if required, would not unduly affect the locality.
31. The ES notes that the connection between the three docks is a defining and important landscape feature, and records that whilst LCZ1 is not of high scenic quality it does make an important contribution to the wider landscape of the Swansea area. The ES states that the building would be a prominent element within the dock landscape and would contrast with the existing built structures, especially as the plume from the stack would be a prominent feature drawing attention to its verticality, given the lack of emissions currently generated from the dock area.²⁴ The vertical presence of comparatively flimsy elements, such as the existing cranes, lighting towers and wind turbine, would not, in my view, be significant enough to have any moderating influence on the bulk of such a large structure. Furthermore, a building of this size and siting would disrupt the relationship between the three water bodies that the ES considers creates an important visual connection and spatial arrangement that is evident both within this LCZ and from more elevated landscapes.
32. Taking all these matters into consideration, I find that the proposed development would have at least a minor adverse effect on LCZ1. This is particularly so having regard to the likely effect on the northern part of LCZ1, around Fabian Way and the park and ride car park, where a building of the scale and design proposed, located

²² Document A3.

²³ ES paragraph 7.4.1.

²⁴ Document CAT2 includes photographs of the stack and plume at a biomass power station at Lockerbie, but these photographs are of limited value in assessing the likely plume here, because the details of all the circumstances which applied at the time the photographs were taken are not available.

between this part of the City and the sea, would be a notable change in landscape characteristics that would be evident over an extensive area. The curved roof design, along with an appropriate choice of external materials/colour, would be of limited benefit in minimising the visual dominance of such a large structure.

33. Most of LCZ2, described in the ES as Dockland Regeneration, comprises SA1SW. This landscape is in transition, evolving into what the ES describes as a "lively, attractive waterfront destination fostering a high standard of urban design and architecture with an emphasis on innovation, modernity and flexibility." Existing development includes high density waterside housing, alongside office, service, retail and leisure premises of striking and contemporary design. It was clear from my site inspection that the completed parts of this regeneration area are very attractive in terms of landscape quality and have high landscape value. The ES notes that the Prince of Wales Dock is a visual and physical focus to the development at SA1SW, which would be even more so with the completion of the permitted 400 berth marina.
34. The ES records LCZ2 as having "Sensitivity to Change: Low-High (subject to ongoing regeneration)". The appellant's landscape witness thought it should be 'medium', for similar reasons, but accepted at the Inquiry that once completed SA1SW would then have high sensitivity to change. The redeveloped parts of the LCZ are of a particularly high quality and distinctive character that I consider would render them susceptible to relatively small changes of the type that would arise from the appeal scheme. From these areas, in the vicinity of the Village Hotel and apartments on South Quay, there are views over largely open vacant land within SA1SW towards the proposed power station. This cannot properly be described, in the terms used in the ES, as a landscape of moderately valued characteristics reasonably tolerant of change of the type proposed. A finding of 'medium' for sensitivity to change is not appropriate for this LCZ. I do not believe that the two/three storey residential development in the south-eastern corner of LCZ2, as envisaged in the approved masterplan for SA1SW, or likely intervening development within the operational docks, would provide the interface or buffer effect relied upon by the appellant's landscape witness. She thought that such a buffer would contain views and limit intervisibility between the two contrasting land uses and character zones, so as to reduce the otherwise overriding dominance of the power station. I find that the proposed development would have a moderate adverse effect, because its scale would diminish the setting of LCZ2.
35. LCZ3 consists of mostly terraced housing on the lower slopes of Kilvey Hill. The ES states that this area would not be directly affected by the proposed development. However, it highlights the framed views down the steep terraced streets towards the docks and the open water beyond as characteristic of this LCZ. The power station would terminate some of these vistas and from some parts of the LCZ block views of the open water, which the ES says create an important visual link to Swansea Bay. This link is, as was apparent at my site visit, a characteristic component of the area. Some of these views are towards existing buildings or activities within the docks, but I do not consider that this devalues the significance of the views from this densely developed residential area towards the sea. The appellant's assessment of a neutral impact understates the contribution of this visual link. The appeal scheme would result in a small but important change in landscape components, which would have a minor adverse effect on LCZ3.
36. The landscape experts agree that the proposed power station would have a neutral

effect on LCZ4, Kilvey Hill. This area is characterised by an open, and in parts wooded, landscape with expansive views over the City and the Bay. The proposed development would be a prominent built feature, but would not adversely impact on the character of LCZ4, which derives from its elevated position and wide outlook over the urban area.

37. LCZ5 Maritime Quarter and LCZ6 Industry Dominated Coastal Strip were considered by the appellant not to be affected by the proposed development, and so were not considered further in the assessment in the ES. However, LCZ5 is not only characterised by the dense urban fabric centred on South Dock Marina, River Tawe Basin and Swansea Bay, but also includes a wide expanse of beach below the Promenade and to the west of the pier. The Council's landscape witness considers that the beach has a high sensitivity to the type of change proposed, and that the plant, with stack and plume, would bring about a notable change in character. The ES does refer to the expansive beach and inter-tidal zone, which it says creates an important feature within LCZ5, as it provides both a focus for activity and views, including towards the dock areas to the east. It gives LCZ5 high sensitivity to change, considers it to be very attractive in terms of scenic quality, and of high landscape value at a local level. The open and exposed beach has a distinctive character that I consider to be susceptible to relatively small changes of the type proposed. The proposed stack would be a prominent feature in the docks. The eye would be especially drawn to it when it emitted a visible plume. I find that the appeal scheme would not fit the scale of the landscape and that effective mitigation would not be possible because of the nature of the proposal. It would have at least a minor adverse impact on LCZ5.
38. The effects on LCZ6 were not disputed by the Council. I have no reason to disagree, but note that the part of this area to the south of Fabian Way includes the former BP transit site. This is a designated Green Wedge where policy provides that any development that would prejudice its openness would be considered as inappropriate development and would not be permitted (see below). The ES refers to a broad coastal strip and active dune system, which does not fit with the description of this LCZ as 'industry dominated'. Nonetheless, this observation does not alter my view about the overall landscape character assessment, and I deal with this site in more detail in the section below about visual impact.
39. In the appellant's analysis a minor adverse impact is not considered to be significant. However, a moderate adverse impact on one LCZ and a minor adverse impact on another three LCZs, in combination, amount in my view to significant harm to the landscape character of the area.

Visual impact

40. Fourteen viewpoints used in the ES were selected by the appellant in consultation with the Council, but the Maritime Quarter Residents' Association (MQRA) contends that these are not entirely indicative of views which would be adversely affected by the proposed development. The Council's landscape witness also included photographs from other viewpoints. In addition, I have had the benefit of my extensive accompanied and unaccompanied site visits around Swansea and the wider area.
41. The ES assessment is based on the GLVIA. It involves analysis of sensitivity to

change, both in terms of scenic quality and the value of the view to the receptor, along with the magnitude of change.²⁵ The ES predicted moderate adverse effects for residential properties with either unbroken or elevated views of the proposed power station from Viewpoints 3-8, with Viewpoint 2 (Langdon Road) potentially experiencing moderate to major adverse impacts for upper storey properties. It added that the power station would be a prominent feature in the view from these locations, which due to its scale and location would not be able to be mitigated. The updated assessment for the increase of the stack height to 70 m noted that the proposed structure would be more visible from lower storeys at Viewpoints 2 and 8 (Flats on southern side of Prince of Wales Dock), and that the stack could break the horizon when viewed from Viewpoint 12 (Berwick Terrace, Tai'r Ysgol).²⁶

42. There was considerable agreement between the landscape experts about the likely adverse visual impact from Viewpoints, but not always about its degree of significance. I deal in more detail below with Viewpoints 2, 3, 8, 9, 10 and 11, along with issues arising from some of the Council's viewpoints A-Q. Before doing so, I comment on Viewpoint 1 (Fabian Way), located at a busy road bridge some 750 m from the appeal site, with oblique views of the Docks, where the ES finds a minor adverse visual impact.
43. This is the only viewpoint within the eastern approach to the City that is included in the assessment, notwithstanding that the UDP identifies Fabian Way as a key gateway to the City, within a sensitive area where the Council will seek substantial improvement, and where care will need to be taken to minimise the visual and physical impact of any proposed land uses/developments.²⁷ The assessment does not reflect the importance of this eastern approach to the City, where the redevelopment of such a significant brownfield waterfront and coastal area is to be, according to national and local policy, considered with the benefit of a Waterfront regeneration masterplan.
44. The former BP transit site, cited above in LCZ6, and which is the subject of an application for a university campus (see below), also lies within this eastern corridor. There is nothing to indicate the visual impact of the proposed power station in its waterfront context from this part of the City. Viewpoint G does depict the view from a part of the eastern approach to the City, the distinctive new bridge that is used by buses accessing the park and ride car park, which is also an important footpath and cycleway. The proposed power station and stack would be prominent in views from this elevated vantage point. Its size would dominate views towards the sea. Given the sensitivity of the eastern approach to the City, I consider that it is an important view, which is valued notwithstanding that the operational docks occupy the middle distance between the vantage point and Swansea Bay. In the terms used in the ES it would be of high sensitivity because the changed landscape would be an important element of the view. The magnitude of change would also be high because the proposed development would result in a very significant change in the existing view. I find a significant adverse visual impact from Viewpoint G.
45. Viewpoint 2 is from the eastern part of SA1SW, but Viewpoint H better demonstrates the view from the closest part of SA1SW to the appeal site. This

²⁵ Document CD24.

²⁶ Document A3.

²⁷ Document CD20 paragraph 2.3.4 (5).

vantage point is also close to the access road leading to the ferry terminal, and near to the route for the proposed link between the Tennant Canal and the Prince of Wales Dock, which is shown on Plan 5 of the SPG, and is also provided for in the approved masterplan for SA1SW.²⁸ Viewpoint N shows the view from the Village Hotel car park. These are important vantage points close to the appeal site, where there is general agreement that the proposed development would have a moderate to major long-term adverse visual impact.

46. Viewpoints 3 (North side of Prince of Wales Dock) and 8, the latter having a similar location to Viewpoint D, are within other parts of SA1SW, where the ES predicts a moderate adverse visual impact. Viewpoint E is located at the western end of the Prince of Wales Dock. There is more likelihood that existing or future intervening buildings would provide some screening of the proposed power station from these central and western parts of SA1SW. This would also apply to the view from the Sailbridge, at Viewpoint F, and the approaches to it. However, the proposed stack would be prominent in some views from important public vantage points, either between or over buildings.
47. Photographs from West Pier at Viewpoint M depict the view from near to Viewpoint 9. The ferry terminal structures are prominent in this view. The appellant assessed that the power station would have a minor adverse visual impact. The Council's landscape expert considers that this understates the likely effect. Given the proximity of the ferry terminal structures, I concur with the appellant's analysis. Viewpoint 10 (also Viewpoint C) is Trafalgar Bridge, an important pedestrian link over the River Tawe Basin. The proposed stack would be seen above the existing warehouses in the docks, and I am not convinced that future development within SA1SW would provide the degree of screening relied upon in Table 7.11 of the ES. I share the Council's concern about the appellant's finding of a negligible or neutral visual impact from this viewpoint.
48. Viewpoint 11 (Marina Tower/Observatory) is on the Promenade. The ES states that the western elevation of the proposed power station would be distinguishable from this vantage point, although set behind buildings in the docks. It adds that the building would obscure some of the hills behind, but that only the stack would break the horizon. This long Promenade focuses the attention of those travelling east along it onto that part of the docks which would contain the proposed power station. The appellant's finding of a minor adverse visual impact understates the effect of such a large structure in this location.
49. The Council identified viewpoints at The Mumbles, Black Pill and Aberavon Sands (Viewpoints O, P and Q), but provided no photographs because of hazy weather conditions on the day that photographs were taken. The Gower Society is also concerned about views from the Gower Area of Outstanding Natural Beauty (AONB), which extends across the Gower Peninsula and down to Black Pill and Mumbles Head.²⁹ The former BP transit site offers views at a shorter distance across part of the Bay towards the proposed development. Such views, some of them at considerable distance, could be significant depending on weather and lighting conditions. However, the appellant's submission that the highest the Council could reasonably put its case is that the proposal might have minor adverse visual impacts on these distant vantage points has some merit. Nonetheless, it

²⁸ Documents CD21 and C13.

²⁹ Document C3 and letter from Malcolm Ridge attached to Document SCS1.

would be the clear days when the wide sweep of the coastal scenery was most appreciated that the proposed power station and stack would be most evident.

50. An update was given to the Inquiry about the potential visual impact on development that had not been constructed at the time of the original assessment, at Aurora and Meridian Quay. Aurora is a 14 storey residential development on the south-eastern end of the Maritime Quarter (Swansea Point), where properties with windows oriented in an easterly or south-easterly direction would, in the appellant's view, experience moderate adverse visual impacts. Meridian Quay is a 29 storey mixed-use building located in the western part of the Maritime Quarter. With medium sensitivity to change, and low magnitude of change given the expansive view, the appellant's assessment disputes MQRA's finding of a moderate-major adverse visual impact on Meridian Quay. I saw the view from the upper floors of both the Aurora apartments and Meridian Quay as part of my accompanied site inspection. I am satisfied that the appellant's assessment is reasonable given the panoramic views over a wide part of the City that are available from these buildings. The view from ground level in the vicinity of Aurora apartments, which would also be seen from a proposed café nearby, is shown in the photograph from Viewpoint B. It was apparent from my site inspections that development on the riverfront and Atlantic Square sites, to the north of Aurora, which include a proposed hotel, would also experience a moderate adverse visual impact.
51. The appellant considers that the Council's assessment of sensitivity undervalues the existing industrial and dockland context of the appeal site, and that the significant residual visual impacts from the proposed power station would be acceptable in the operational docks, with its associated activity and development. There is no policy presumption against further industrial development in the docks. This is evident by the UDP allocation for B1, B2 and B8 uses in Policy EC1 for an area that falls within the operational docks as designated by Policy AS12. However, planning policy for the area foresees the co-existence of the operational docks with nearby uses, but only on the basis that development within the docks is compatible with adjacent development areas.
52. The Town and Country Planning (General Permitted Development) Order provides considerable rights for statutory undertakers or their lessees for development on operational land within the docks. However, there is nothing to indicate a likely prospect that these would be used to construct a building, for the purposes of shipping or related activities, of the scale, design and height of the appeal scheme. The appellant believes that a sea/rail/road freight interchange facility would be likely to be much greater in scale than the proposed building. However, there was no evidence before the Inquiry about any interest in taking up the potential identified in the 2002 SPG, or any evidence that a freight interchange would require a building of the scale, design and height comparable to that of the appeal scheme. There is no fall-back position here which justifies a building of the size and type proposed.
53. The appellant's view that a connection from the power station to the grid would be via underground cabling to the Tir John substation was not challenged at the Inquiry. The Council's criticism that no cumulative assessment has been undertaken for the impact of the grid connection cannot, therefore, be given much weight.
54. I disagree with the appellant's submission that the operational docks would make acceptable the residual visual impacts of the proposed power station and stack. A

building of this size and design should properly be considered in a wider context that takes into account the site's setting within the City and the broad sweep of Swansea Bay. I find that the proposed development would harm the appearance of the area because of its adverse visual impact.

Perception of re-industrialisation

55. There is local concern about re-industrialisation, which is reflected in the Council's reason for refusal. Swansea developed as one of the largest shipping ports in the world during the eighteenth century with rapid expansion in local coal mining, iron production, copper smelting and tinplate manufacture within the area.³⁰ I understand local misgivings about the introduction of new industrial development, given the previous polluting activities and the legacy of environmental problems left for the City and its residents.³¹
56. This sentiment was expressed with poignancy at the Inquiry. MQRA perceive the proposed development as a threat to Swansea's future, and a last chance to throw off the yoke of its industrial past and fulfil its potential as a leading 21st century waterfront city. I do not underestimate the apprehension that local residents feel. However, with modern planning and pollution controls, along with improved technology, there is no prospect of Swansea's industrial past being repeated.
57. Furthermore, new industrial development to meet the growth needs of the local economy is provided for in the UDP. For example, Policy EC1 (5) includes an employment land allocation of 34 ha for Class B1, B2 and B8 uses within the vicinity of the docks. Taking all these considerations into account, I do not consider that the perception of re-industrialisation is a very helpful concept in determining this appeal on its planning merits, and I have not given it much weight.

Regeneration of SA1SW and the City centre

58. SA1SW has, as indicated in the UDP, fundamentally changed the image of the eastern approach to the City and raised the profile of Swansea's waterfront focus. The Council argues that the whole emphasis on the planned waterfront redevelopment is to embrace a high quality, sensitively designed and appropriately scaled environment, and that a major, industrial, out of scale building would reverse this process, and introduce heavy industry more appropriately found in Port Talbot. In the Council's submission, this is likely to undermine the confidence of investors and developers in the integrity of the redevelopment proposals.
59. Public and private investment in SA1SW has transformed this part of the docklands.³² However, a substantial part remains to be developed.³³ The objectors to the appeal scheme stress that the development market and the viability of projects is problematic in the present economic climate, that the market is risk averse, and that any additional perceived problem would introduce further investor caution. There is concern that the appeal proposal is seen as incompatible with SA1SW and so would increase investor caution, drive down property values and discourage potential inward investment. This would blight the SA1SW area and mean that development sites would remain dormant.

³⁰ SoCG Document 1 paragraph 4.1.

³¹ Document 4.

³² Documents 2 and 3.

³³ Documents C5 and CAT11.

60. There is anecdotal evidence about investment in SA1SW slowing down, but it is not possible to attribute any specific element or part of this to the fact that an application has been made for a power station within the operational docks.³⁴ Investment decisions depend upon many factors. This also applies to investment in tourism infrastructure.³⁵ There is little convincing evidence about considerations that might be at work here in addition to the overall market conditions. Even a recent application for residential development to the north of the Prince of Wales Dock, near to the Village Hotel, indicates no more than that the applicant in that case considered it to be a propitious, or at least not an inauspicious, time to submit an application.³⁶
61. I do not, therefore, consider that fears that the proposed power station would jeopardise investment in SA1SW and result in planning blight should be influential in deciding this appeal. However, if a development were to be permitted within the operational docks that was not compatible with SA1SW, in circumstances where material considerations did not justify a departure from the development plan, it might undermine confidence in the ability of planning policy to secure the regeneration required by the spatial strategy. This would harm the proper planning of the area.
62. The study area for the *City Centre Strategic Framework* includes the central commercial area and the waterfront to the west of the River Tawe.³⁷ The *Framework* identifies three priority areas for connecting the City to the waterfront; Paxton Street, Sailbridge and the Maritime Quarter. Any linkage in the vicinity of Paxton Street and the Maritime Quarter, in terms of physical and visual linkage between the City centre and the waterfront, would be unaffected by development of the appeal site. The Sailbridge provides a link between the City centre and the western end of SA1SW, but views from this area to the proposed power station would be limited. The appeal scheme would not impact upon the aims of the *Framework* to overcome the physical and traffic burdens which separate the City centre from the waterfront.

Proposed university campus

63. An outline application with all matters reserved has been made, but not yet determined, for a university campus on part of the former BP transit site, located some 1.2 km to the east of the appeal site.³⁸ The proposal is for the Bay Science and Innovation Campus of Swansea University, including an innovation park, mixed academic, research and development facilities (B1), university residential accommodation and ancillary student/staff facilities, parking and landscaping. The outline masterplan for the campus has been endorsed in a recent Design Commission for Wales Review. The Pro Vice Chancellor of the University considers that the new campus would enable the University to build upon its current reputation for research excellence, provide world class research and teaching facilities, integrating academia with industry, and would attract inward investment from global companies.
64. Swansea University objects to the appeal proposal because its size and scale would

³⁴ Document M7.

³⁵ Document 11.

³⁶ Document 14.

³⁷ Document CD22.

³⁸ Document 10.

have an adverse visual impact on the coastline. The University argues that this may discourage staff, students and industry from re-locating to the proposed new campus. However, this land is part of a Green Wedge, designated in the Neath Port Talbot Unitary Development Plan, where Policy ENV2 seeks to protect the setting of built-up areas and prevent urban coalescence between settlements.³⁹ The policy adds that any development that would prejudice the openness of the Green Wedge will be considered as inappropriate development and will not be permitted.

65. The setting of the proposed campus would include the works on the industrial estate, which lies to the north of Fabian Way and includes a waste incinerator with a stack. The application indicates that the largest and highest buildings on the campus, up to six storeys high, would face towards Fabian Way, with views towards the existing industrial estate. This outlook would not be affected by the appeal scheme. However, views to the west would be towards the proposed power station.
66. Given that the application for the university campus is yet to be determined, along with the policy background, little weight can be given to Swansea University's aspirations for this site. Nevertheless, my findings about the significance of the appeal site being in a prominent coastal setting and on the eastern approach to the City, also apply in so far as its relationship with the former BP transit site is concerned, whatever the former BP transit site might be used for in the future.

Other CHP plants in urban areas

67. I was referred to other CHP schemes in urban settings at Nottingham, Lewisham, Sheffield, Southampton and Monaco. Full details about the circumstances in which these were built are not available. On the evidence adduced, these do not appear to be directly comparable with the circumstances that apply to the appeal scheme. Some of these plants may have developed over time, as part of the urban fabric. None of them occupies a comparable coastal location to that which exists in Swansea.⁴⁰ The plant in Monaco is set back from the coastline behind high density urban development. The energy-from-waste plant at Nottingham is within a waterfront regeneration zone.⁴¹ However, the context is very different from the coastal landscape in Swansea, where the link between the City and the waterfront, along with environmental enhancement of an important gateway to Swansea, are such key elements of strategic policy. I do not consider that the other successful examples of CHP in urban areas cited add much to the appellant's case.

Landscape policy

68. Considerable time was taken at the Inquiry about the link between the City centre and the waterfront. The primary focus of the UDP's spatial strategy is the reinvigoration of the City centre and waterfront, and one of its core elements is to develop a modern, attractive and vibrant waterfront area integrated with a revitalised City centre. However, the spatial strategy also includes capitalising on the redevelopment opportunities afforded by brownfield land and the Waterfront area, which is shown on Diagram 1: Spatial Strategy Map, and includes the Docks and land to the east of the Docks. Part (xii) of the strategy states that the extensive area of brownfield land on the eastern approach to the city, south of

³⁹ Neath Port Talbot Unitary Development Plan, adopted 2008, Policy ENV2 B(iv) Crymlyn Bog/Crymlyn Burrows/LLandarcy.

⁴⁰ Documents A11 and C6.

⁴¹ Documents A10 and C8.

Fabian Way and east of SA1SW, offers considerable regeneration opportunities.

69. Redevelopment of these areas has the potential to create a major mixed use destination, in order to, amongst other things, build upon the success of SA1SW, and provide opportunities for potential new tourism, leisure, and commercial developments in a range of settings. UDP Policy SP1 favours development proposals designed to a high quality and standard, which enhance townscape, landscape, sense of place, and strengthen Swansea's Waterfront identity. It is clear that there is much more to local policy for the waterfront than links with the City centre. The waterfront on the eastern approaches to the City is also important. It is sufficient, according to the UDP, to warrant its inclusion in a waterfront regeneration masterplan for the wider Swansea Bay area. Whilst such a masterplan has not been published, the need for it is indicative of the importance given to this area in national and local planning policy.

Findings on the first main issue

70. I have found in the appellant's favour on some of the issues before the Inquiry that might be likely to affect the character and appearance of the locality. However, I consider, for the reasons set out above, that the proposed power station would have an adverse effect on landscape character and visual impact.
71. On the first main issue, I find that the proposed development would harm the character and appearance of the area. It would conflict with the objectives of good design set out in UDP Policy EV1, particularly with respect to appropriateness to its local context in terms of scale, height and massing, and the quality of the townscape. The proposal would utilise previously-developed land, but would be contrary to the aims of UDP Policy EV2 concerning the impact of development on the landscape, and its integration with the seascape or coastline whilst avoiding conspicuous locations on skylines. Given the importance of the relationship between the City and its coastline, and environmental improvement of the eastern approach to the City, I consider that the adverse impact and policy conflict I have identified would result in substantial harm.

Living conditions

Outlook and residential amenity

72. The outlook from some existing dwellings would be significantly altered by the proposed power station, particularly those in Aurora apartments and some houses in the Port Tennant, Dan-y-graig and St Thomas area that have an outlook towards the appeal site. It might also be the case that the residential development proposed for the eastern end of SA1SW in E6, E7 and E8 would not be designed so that all dwellings were oriented inwardly and without a significant outlook towards the appeal site.⁴² If this were so, the occupiers of these dwellings would also have views of the proposed power station, which could, at the closest, be at a separation distance of some 315 m.
73. However, the visibility of the proposed power station should not be a decisive consideration in terms of its likely impact on residential amenity because of its effect on outlook. The issue is whether the structure would have such an overwhelming and oppressive impact on residential properties that it would result in

⁴² Document C13.

unsatisfactory living conditions and so unacceptably affect amenities and the use of land and buildings which ought to be protected in the public interest. This would be a large building that would impact on many views. The tall stack with a plume, at times, would certainly catch the attention of residents whilst they were in their dwellings or enjoying their private amenity space. Nevertheless, because of the separation distance from dwellings, I do not consider that the proposed power station would be so overbearing or dominating that it would significantly harm the residential amenity of those living nearby. The proposed development would not, by reason of the outlook from dwellings, have an unacceptable adverse effect on the residential amenity of those living nearby.

*Pollution*⁴³

74. PPW highlights the roles of the planning and pollution control systems, and the need for the respective authorities to work closely together. It provides that any grant of planning permission should ensure that any remaining pollution concerns are capable of being dealt with under the pollution control regime, and to ensure that any planning conditions imposed to protect the environment neither duplicate nor conflict with conditions likely to be imposed by pollution authorities.⁴⁴ The Inquiry proceeded on the basis that the proposal would require an Environmental Permit (EP) from the Environment Agency Wales (EAW).⁴⁵ The Council and the appellant agreed at the Inquiry that it would be necessary to impose a condition that the appliance installed in the plant should have a rated thermal input of 50 or more megawatts to ensure that this would be so. EAW in its consultation response about the application advised that an application for an EP would include another EIA and would have to demonstrate that the techniques employed were the Best Available Techniques (BAT). The determination process would include a period of public consultation, along with detailed consideration of emission limits and the design, including the height, of the proposed stack.
75. Local residents and CAT object to the proposal on the grounds of its likely effects on air quality. The Council designated the Hafod Air Quality Management Area (AQMA) because of expected breaches of the air quality objectives for annual mean NO₂. The AQMA lies in central Swansea to the north-west of the appeal site. CAT submits that the annual mean NO₂ concentrations in the AQMA continue to breach the air quality objective and limit value of 40 µg/m³, and that the proposed biomass power station would further exacerbate these breaches. Council measurement of air quality within the City, including within the AQMA, has recorded concentrations above 40 µg/m³ in diffusion tubes, but these are less accurate than the continuous analysers used at three fixed roadside locations. The two continuous analysers located in the AQMA measured concentrations that complied with the air quality criteria. Sites surveyed by diffusion tubes to the east of the AQMA towards King's Dock and in Port Tennant generally had lower concentrations, although I have taken into account Swansea Civic Society's observation that the Tir John landfill was not operating at that time.
76. The appellant used a dispersion model called AERMOD to calculate concentrations of

⁴³ Prior to the commencement of the Inquiry I asked the Council and the appellant for a joint statement about the respective roles of the planning and pollution control regimes in this case. I have included this as Core Document CD30.1.

⁴⁴ *Planning Policy Wales* paragraphs 13.12.2 and 13.12.3.

⁴⁵ Pursuant to the Environmental Permitting (England and Wales) Regulations 2010.

NO_x, NO₂, SO₂, particulate matter (PM₁₀), CO and HCl. This predicted insignificant increases in pollutants from the proposed power station. The model used worst-year meteorological data from Mumbles Head, which has a coastal setting likely to be affected by on-shore and off-shore breezes. The NO₂ predictions for a number of sites within SA1SW and at elevation near recently built high-rise apartments, which are in addition to the four residential receptors originally assessed, were significantly below the air quality criterion for both short term concentration and long term annual mean.⁴⁶ I have noted the appellant's comment that concentrations of NO₂ are predicted to decrease in future because of increasingly stringent vehicle emission standards. However, there is no certainty that this will have the predicted impact in all locations, and I do not rely on it here.

77. The appellant's assessment acknowledges that particles emitted from any combustion process contain trace quantities of various toxic substances, including polycyclic aromatic hydrocarbons (PAH), trace metals and dioxins. In so far as particulates are concerned, I accept that the likely process contribution to annual mean PM₁₀ concentrations is sufficiently low so as to not warrant an assessment of daily mean PM₁₀ concentrations. It is reasonable here to assume that process concentrations of PM_{2.5} would be likely to be the same as those modelled for PM₁₀. Any contribution of the scheme to ozone (O₃) levels would be likely to take place at some distance from the area, given that it results from a reaction which takes place over time between other gases. Dioxin emissions depend upon the temperature of combustion and the presence of chloride in the fuel, as does the emission of hydrogen chloride. Wood chips tend to be low in trace elements, chlorine and sulphur content. Combustion control and abatement technology would be a matter regulated by EAW. I am satisfied that the appellant's assessment demonstrates that the predicted maximum increments in concentrations of toxic substances in air arising from emissions and the calculated increments in exposure to these substances would be negligible in comparison with health-based guidelines for community exposure.
78. The removal of ash, control of dust and any fugitive emissions or bio-aerosols from wood chips, are all matters that could be addressed by appropriate planning conditions. One of the possible sources of wood fuel given by the appellant at the Inquiry was the Baltic region. SA1 and others raised concerns about the possibility of wood being contaminated by the fallout of radioactive material from the Chernobyl disaster. This appears to have been a consideration that EAW took into account in imposing a condition on the EP for the Prenergy power station at Port Talbot that wood fuel should not be sourced from areas where soils are recognised to have a radioactive content above normal background levels for that geographical area.⁴⁷ Such contaminant migration is properly a matter for pollution control, and I have no reason to doubt that a similar EP condition for the appeal scheme would be effective and enforced.
79. The imposition of appropriate planning conditions, to incorporate pollution prevention measures during construction, would reasonably deal with amenity considerations that could potentially impact on the use and development of land from emissions from the proposed power station. I am satisfied that any remaining pollution concerns are capable of being dealt with under the pollution control regime. The proposal would not be likely to result in unacceptable levels of

⁴⁶ Document A9.

⁴⁷ Document CAT12. Condition 1.4.6.

pollution. I deal with the effects of emissions on nature conservation in more detail later.

Noise and disturbance

80. There is local concern about noise and vibration from the proposed plant and its construction. Noise from construction, including any piling, is a matter that could reasonably be controlled by the imposition of a condition requiring approval of, and adherence to, a construction management scheme. The ES states that the plant would be mostly contained within a building, where it would be possible to incorporate acoustic treatment to control plant noise emissions and minimise breakout noise. However, noise from fans within the external heat rejection unit would be potentially the most significant source of operational noise. The Inquiry also heard that noise from boiler blow down would be likely to occur for very short periods a few times a day, and that this would have a loud hissing character.⁴⁸
81. Existing noise levels at two points were surveyed at locations which are reasonably representative of noise sensitive receptors in the locality of the proposed power station. The approach adopted in the ES relies on the provisions of BS4142:1997.⁴⁹ The ES states that for a development that introduces new noise sources into an area it is prudent to increase noise levels by less than the 5 dB(A) criterion suggested in BS4142. It adds that noise limits would be imposed by condition, and that mitigation would be provided in the engineering and building design so that a 42 dB $L_{Aeq,T}$ noise limit at the nearest noise sensitive receptor would be met, and so result in a negligible impact.
82. CAT is critical of this approach, which it considers to be a “reverse assessment” because there is no indication at this stage about likely sound power levels generated, or modelling of sound propagation. CAT considers that there is no means of testing the achievability of the standards which the limits seek to impose on the proposed development. However, the suggested conditions also require prior approval of a noise attenuation scheme, including predictive modelling of propagation, to demonstrate that the proposed development would be capable of compliance with these limits.⁵⁰ Furthermore, TAN11 *Noise* does not rule out imposing noise limits. It adds, given that such limits would allow the developer to achieve the required noise level in whatever way was considered to be most cost-effective, that they may be suitable for speculative developments.
83. The appellant suggested at the Inquiry the following noise limits for the proposed power station, including noise from any fans or other equipment:
- (i) A rating noise level, assessed in line with the guidance in BS4142, for day time not exceeding 45 dB $L_{Aeq,1hr}$ and for night time (between the hours of 2200 to 0700) not exceeding 42 dB $L_{Aeq,5min}$.
 - (ii) A night time Noise Rating limit of NR40 dB $L_{eq,5min}$ outside noise sensitive properties.
 - (iii) A night time peak or maximum limit of 60 dB $L_{Amax,15min,f}$ outside noise sensitive properties.
 - (iv) A restriction on any tonal noise.

⁴⁸ Document 7 and John Discombe in response to questions by the Inspector.

⁴⁹ British Standard 4142: 1997 *Method for rating industrial noise affecting mixed residential and industrial areas*.

⁵⁰ Document A16.

84. In addition, the need to impose a condition for monitoring and to deal with any complaints was acknowledged at the Inquiry. Compliance with the L_{Amax} and tonal restrictions would be likely to require specific measures to be built into the design to attenuate noise from boiler blow down. The Council does not dispute the quantum of the limits suggested for rating level, Noise Rating or L_{Amax} . I have no reason to disagree, having taken into account the *WHO Night Noise Guidelines for Europe*.⁵¹
85. Noise from vehicular transport, unloading of ships, and re-opening of the rail link could occur within the operational docks as permitted development, and there is nothing to indicate that the appeal scheme would be likely to generate more noise by these means than that which might occur in any event.
86. Subject to the imposition of appropriate planning conditions, the proposal would not have an unacceptable adverse impact on the living conditions of neighbouring residents by reason of likely noise and disturbance.

Health

87. The appellant's Health Impact Assessment (HIA) concluded that the effects of the proposed development on human health would be negligible. There was criticism about consultation and engagement with the local community in its preparation, but in my view it was appropriate to use consultation on the planning application to inform the HIA. It was also a reasonable approach to 'scope out' of the assessment those potential effects that were likely to be so small that they did not merit more detailed investigation. The HIA is no less robust for the way it used mean annual levels to assess likely impacts. I am satisfied that it is a reasonable worst-case assessment. The limited impacts it identified on the basis of a 60 m stack would be even less significant with the 70 m stack now proposed.
88. The review tool by Ben Cave Associates, cited by CAT, is not a policy consideration and its reliance on discretion in the scoring means that it is not very helpful in assessing the value of the appellant's HIA. The detailed criticisms of the HIA do not devalue it as a useful aid in evaluating likely effects of the appeal scheme at the planning application stage. The HIA is a robust assessment that accords with accepted practice, and is reasonable for the purposes for which it was intended.⁵²
89. I found CAT's evidence about links between mortality and increased disease, and the effects of air pollution from power stations of little assistance.⁵³ These are very complex interactions. The simplistic inferences drawn by CAT from the limited documentation submitted to the Inquiry are unconvincing.
90. There is local concern about the cumulative impact of emissions from the power station, together with coal dust from the docks, and emissions from the cement factory, sewage treatment plant, waste incinerator and landfill site. MQRA and SA1 are concerned, based upon previous incidents, about breaches of pollution controls and possible accidents, and there is a lack of confidence in the resolve of authorities to deal with what the community considers to be on-going pollution problems.
91. The fact that it was considered necessary to raise the height of the proposed stack

⁵¹ Document A4.

⁵² I have had regard to Documents CAT6, CAT7 and CAT8 in coming to this view.

⁵³ Documents CAT4 and CAT5.

from 60 m to 70 m to disperse emissions served to heighten local fears about the pollution threat. Local anxiety is exemplified by MQRA's submission that the perception of pollution would hang over the area like an invisible cloud. Such fears are not irrational given that the WAG's *Practice Guidance – Planning Implications of Renewable and Low Carbon Energy*, July 2010, (*Practice Guidance*) advises that CHP biomass plant emissions can have an impact on air quality, particularly from stack emissions (e.g. nitrogen and sulphurous oxides), particulate emissions, and emissions from construction and operation vehicles.⁵⁴

92. Fear about the consequences of the proposed development on the health of local residents is a material consideration in this case, and I have given it some weight. However, it seems to me that these fears underestimate the efficacy of the stringent pollution controls which would be likely to apply to the proposed power station. This limits the weight that should be given to health fears in determining this appeal.

Findings on the second main issue

93. On the second main issue, I do not consider that the proposed development would have an unacceptable adverse effect on the living conditions of nearby residents, or on other land uses and activities in the locality, by reason of its impact on outlook, pollution, or likely noise and disturbance. I find no conflict with UDP Policy EV40 concerning harm to health and local amenity due to significant levels of air, noise or light pollution. Local fears about pollution and related health implications are understandable given the history of pollution in the locality. Nevertheless, by comparison with the other weighty issues, on which the outcome of this appeal depends, it is not a consideration that I believe should weigh heavily in the overall planning balance.

Nature conservation

94. I have had regard to evidence about King's Dock being a wintering ground for birds.⁵⁵ However, I am satisfied that the limited wildlife interests of the appeal site and its immediate surroundings could be safeguarded by the imposition of appropriate conditions requiring the mitigation measures set out in the ES. The Council takes no issue with wildlife matters, but the Rule 6(6) parties maintain an objection about the likely effects of emissions on Crymlyn Bog SAC, a designated European site. This is the most extensive wetland area of its type in Wales, which is part of a larger inter-estuarine complex that includes adjacent Pant y sais fen. Crymlyn Bog and Pant y sais fen are designated Sites of Special Scientific Interest (SSSI), which support an exceptionally wide range of rich and poor fen communities.
95. CCW advised in March 2008, on the basis of the ES, that, as the process contribution to deposition of nitrogen and acid at the designated sites exceeded 1% of the critical load, an appropriate assessment (AA) would be needed in accordance with the Habitats Regulations.⁵⁶ The critical load is a standard derived as a benchmark after which possible adverse impacts may be likely. It is specific to each SAC and for each pollutant. Mitigation was developed by the appellant in

⁵⁴ Document CD26 paragraph 4.4.7.

⁵⁵ Document 2.

⁵⁶ Document CAT3. The Habitats Regulations is now the Conservation of Habitats and Species Regulations 2010.

order to achieve a contribution of less than 1% of the critical load for nitrogen deposition. The modelling concluded that the process contribution from the proposed power station to nitrogen deposition could be reduced to under 1% of the minimum nitrogen deposition critical load with a stack height of 70 m and an NO_x and SO₂ removal efficiency of 50%.

96. In December 2008 CCW accepted that the August 2008 *Supplementary Air Quality Assessment* demonstrated that the scheme could reduce nitrogen deposition to below 1% of the critical load for fen habitat. CCW maintained a requirement for an AA for acid deposition at Pant y sais fen, but withdrew its objection in February 2009 following a further report, by Dr Headley dated December 2008, on the impacts of acid deposition.⁵⁷ I have no reason to doubt Dr Headley's findings that the rates of water flow to neutralize acidity and the estimated additional input of acidity from the proposed power station would result in negligible and un-detectable acid deposition on the Pant y sais fen part of Crymlyn Bog.
97. CAT cites the judgment in *Waddenzee* about any project being subject to an AA if it cannot be excluded, on the basis of objective information, that it will have a significant effect on that site, either individually or in combination with other plans or projects.⁵⁸ The way the test of significance has been carried out for nitrogen deposition, where the background level already exceeds the benchmark or critical load, is disputed by CAT. The consideration given to the likely cumulative impact with other sources of NO_x emissions, including the Crymlyn Burrows waste treatment plant, the Coed Darcy development of 4,000 new dwellings, and the 3.5 ha of industrial land on the adjacent former BP refinery site, along with other power stations in the wider area, is also contested.
98. The appellant's modelling predicts that the proposed King's Dock power station would increase nitrogen deposition rates by 0.97% of the critical load, some 0.05 kilograms of nitrogen per hectare per year (kg N/ha/year), which would be a similar figure to that for the other three power stations in the wider area. The critical load, according to CCW, in the northern part of Crymlyn Bog is 5 kg N/ha/year, and in the southern part 13 kg N/ha/year, with a background contribution to nutrient nitrogen deposition rates of 11.4 kg N/ha/year.⁵⁹ Given the ability of selective catalytic and non-catalytic reduction abatement technologies, CAT submits that a further increase in stack height would be necessary to reduce the process contribution to less than the 1% critical load at Crymlyn Bog.
99. CCW's advice to the Council is based on its internal guidance. This includes the 'Alone significance test', which provides that where the process contribution to deposition within a European site is less than 1% of the relevant long-term benchmark, the emission is unlikely to have a significant effect; and the 'In Combination significance test', where the process contribution is > 1% of a long-term benchmark and the predicted environmental deposition (which is the sum of

⁵⁷ This report was submitted with the appeal documentation and was not listed as a Core Document.

⁵⁸ C-127/02:Grand Chamber of the ECJ, September 2004 – Document CAT20.2.

⁵⁹ Prior to the commencement of the Inquiry, I asked for clarification about the Council's 'Test of Likely Significant Effect', which refers to an existing heavily exceeded background of both NO_x and Acid at Crymlyn Bog. The Council and the appellant's agreed response [Core Document CD30.2] states that the nitrogen critical load for transition mire and quaking bog at the SAC is 5-10 kg N/ha/year, and 13-20 kg N/ha/year for calcareous fen at the SAC.

the process contribution and background deposition) is > 70% this is a likely significant effect. Conversely, if the predicted environmental deposition is < 70% it is unlikely that this will be significant (unless the process contribution is very high). An example is also given where, although the background already exceeds the benchmark, as the process contribution is less than 1%, there is no likely significant effect. This is the case that applies here.

100. EAW applies similar guidance.⁶⁰ This provides at paragraph 2.6.1 that where the concentration within the emission footprint of a European site is less than 1% of the relevant long-term benchmark, the emission is not likely to have a significant effect alone or in combination, irrespective of the background levels. Later paragraphs in this section, including 2.6.6, which refers to circumstances where the sum of the process contribution and background concentration is greater than 70% of the benchmark, appear to apply where the process contribution exceeds 1% of the benchmark. In the appeal before me, the relevant authorities do not rule out, as an unrealistic prospect, that the plant could be designed and operated so as to limit NO_x emissions to less than 1% of the critical load for the SAC. EAW has the ability to enforce this by means of an EP.
101. CAT's criticisms of the way the appellant's assessment deals with dry/wet deposition of nitrogen, and possible coastal fumigation, do not advance its case very much. I have taken into account that the Environment Agency's (EA) *Horizontal Guidance Note H1 – Annex (f)* provides for process contributions to be calculated either by detailed emissions modelling or an equation that includes a nominal factor of 3 to convert dry deposition to total deposition.⁶¹ However, the more detailed assessment provided for in EAW's Stage 3 and 4 Assessment of new PIR permissions under the Habitats Regulations notes that short range effects (<10 km) will only be influenced by dry deposition.⁶²
102. Furthermore, the whole basis of the appellant's assessment is that the process contribution could, by the design and operation of the plant, be kept below the 1% critical level. The details about how this would be achieved are a matter for EAW, which would apply its own guidance about calculating the process contribution, including wet/dry deposition and any specific coastal meteorological effects. I note that EAW's guidance includes reference to air stability, and cites research that specifically deals with modelling for the effects of coastal sites.⁶³
103. MQRA and SA1 refer to the endangered Fen Raft Spider found at Pant y sais fen, which is one of its only three habitats in the UK. They also refer to Reed Bunting and other wildlife to be found in the SAC and SSSI. However, emissions from the proposed power station would not be likely to have a significant effect on the habitat that sustains these species. Nor would it be likely to affect the wildlife at Crymlyn Burrows, which lie to the south of Pant y sais fen, on the coast side of the A483.
104. I do not consider that the facts before the Inquiry are materially different to

⁶⁰ Document CAT9 tab 2. *Stage 1 and 2 Assessment of new PIR permissions under the Habitats Regulations*.

⁶¹ Document CAT9 tab 1 page 27.

⁶² Document CAT9 tab 3.

⁶³ Document CAT9 tab 1 page 28. Jones JA, 1983, *Models to allow for the effects of coastal sites, plume rise and buildings on the dispersion of radionuclides and guidance on the value of deposition velocity and washout coefficients* NRPB-R157.

those presented to CCW when it considered the application. I find that the proposed development would not be likely to have a significant effect on the SAC and SSSI, either alone or in combination with other plans or projects. A requirement to undertake an AA does not arise for the purposes of determining this planning appeal.

105. On the third main issue, I do not consider that the proposed development, subject to the imposition of appropriate conditions, would have an unacceptable adverse effect on wildlife or nature conservation. I find no conflict with UDP Policy EV27 concerning designated nature conservation sites, or with TAN5 *Nature Conservation and Planning*.

Renewable energy

*Policy background*⁶⁴

106. The WAG and UK Government have set ambitious targets for RE, including a legally binding requirement to source 15% of its energy from renewable sources by 2020.⁶⁵ Targets are also a matter of law by virtue of the Climate Change Act 2008. The UK *Renewable Energy Strategy* promotes RE to prevent climate change and to secure future energy supplies.⁶⁶ PPW establishes specific renewable electricity production targets for Wales of 4 TWh per annum by 2010 and 7 TWh per annum by 2020. The Coalition programme for government in the UK includes seeking an increase in the target for energy from renewable sources, subject to the advice of the Climate Change Committee.⁶⁷

107. The PPW targets, which should be seen in the context of the WAG's Energy Policy Statement (EPS), *A low carbon revolution*, March 2010, were included in Ministerial Interim Planning Policy Statement 01/2005 (MIPPS), and so are repeated in the UDP.⁶⁸ The WAG's aim is to secure an appropriate mix of energy provision for Wales, whilst minimising the impact on the environment. The EPS sets out action to produce low carbon electricity on a large scale. This aims to deliver by 2020 up to 6 kWh/d/p (kilowatt hours per day per person) in Wales of electricity from biomass – 50% indigenous/50% imported – and a heat potential of 2-2.5 kWh/d/p in Wales. Appendix 1 of the EPS provides a breakdown of Wales' sustainable RE potential to 2020/2050, which includes 3 kWh/d/p from imports and 3 kWh/d/p from indigenous supply of biomass for electricity, in an overall total for Wales of 43 kWh/d/p.⁶⁹

108. The WAG has consulted on proposed changes to Section 12.8 of PPW and the update is intended to enable the delivery of the EPS.⁷⁰ This is a consultation document, but its Foreword by the Minister for Environment, Sustainability and Housing highlights the role of the planning system in facilitating RE projects whilst

⁶⁴ Policy changes were made during the course of the Inquiry and comments on these changes by the appellant and the Council are at Documents A14 and C14, respectively.

⁶⁵ EU Renewable Energy Directive 09/28.

⁶⁶ Document CD2.

⁶⁷ Document A6.

⁶⁸ EPS is at Document CD12, MIPPS at Document CD18, and UDP reference at Document CD20 paragraph 4.4.12.

⁶⁹ It was explained at the Inquiry that the overall total might be less, depending on the contribution from tidal range, which included provision for the Severn Barrage.

⁷⁰ Document CD27.

balancing local environmental consequences. This is consistent with current national and local policy outlined above. Revision of planning policy to deliver the WAG's agenda to address climate change is foreshadowed in the Consultation Draft, but the details about how it will do so are a matter to be determined with the benefit of consultation, which includes submissions from the Council.⁷¹ It is not, therefore, a document which can be given much weight in determining this appeal.

109. The WAG's *Practice Guidance* is an aid for authorities dealing with RE applications, and I deal with relevant provisions concerning fuel supply and CHP below. The supply and demand for woody biomass in Wales has recently been considered by the National Assembly for Wales Sustainability Committee.⁷² I also deal below with relevant provisions of the Written Response by the WAG to this report.⁷³

110. The 2007 *White Paper on Energy* states that applicants will no longer have to demonstrate either the overall need for RE or for their particular proposal to be sited in a particular location.⁷⁴ I have also taken into account that the targets and aims for RE are intended to be met by a mix of technologies, and that they are not maxima. In terms of what weight should be given to the provision of RE from the proposed power station, the Council argues along the following lines. In a balancing exercise one important benefit could be that the scheme would assist in meeting targets which might not otherwise be met, but that if the targets in all probability would be met anyway, that benefit disappears. The Council considers that the biomass electricity capacity for Wales by 2020/2050 in the EPS is already more than met by the 350 MW Prenergy plant at Port Talbot and the 300 MW Anglesey Aluminium plant. Whether targets in Wales are met or not depends on the future of several large proposed schemes. However, even if the Council's proposition were to be true, this approach ignores the fact that the GHG benefits of utilising sustainably generated RE instead of fossil fuels are fundamentally important to global climate change, irrespective of how a particular scheme tallies with specific targets or aims.

111. I consider that the proposed development gains significant support from relevant policy for the provision of RE. However, I assess below whether any discounting factors should be applied in the circumstances here in connection with fuel supply and sustainability, and the provision of CHP. In doing so, I have taken into account that the EPS aims will be achieved by, amongst other things, promoting the use of waste woods and local supply of biomass rather than very large-scale new planting of commercial biomass in order to prevent negative impacts on the environment or food security, and requiring that any larger scale plant can demonstrate that it is supplied by fuel from sustainable sources. Technical Annex 5 provides that the WAG's energy vision has to be based on sound 'sustainable development' in action, with individual projects assessed on a whole-life perspective, including environmental consequences – global, regional and local, along with other factors such as energy security of supply. It adds that this will require the implementation and design of overarching WAG and other Government policies to produce joined-up government.⁷⁵

⁷¹ Included as an Appendix to Document C14.

⁷² Document CAT18.

⁷³ Document CD28.

⁷⁴ Document A12.

⁷⁵ Document CD12.

Supply of biomass fuel

112. The ES refers to fuel from a number of sources, with 25% sourced from within 161 km of the appeal site and transported in 8,000 tonne trains. The WAG's Sustainability Committee considered representations from the Confederation of Forest Industries and the Wood Panel Industries Confederation about the possible diversion of timber from existing markets. The Committee is very concerned regarding the amount of materials it is envisaged will have to be imported to serve the needs of Wales and the knock-on carbon effect.
113. There is a commitment to increase indigenous supply in Wales by 100,000 ha of additional woodland planting over the next 20 years, which would include provision for wood fuel.⁷⁶ However, given the time needed to grow trees this might not make much of a contribution until the later years of the proposed power station's design life. I also accept that there are limits on the extent that additional planting for Short Rotation Coppice (SRC) and similar woody biomass might contribute, because of farming practicalities and the realities of the markets in which farmers operate. The appellant's expert agreed with CAT that it was likely that more than 75% of the fuel for the proposed power station would need to be imported, and that he personally saw no need for a condition requiring 25% from local sources, if both local and overseas sources were the subject of the same sustainability criteria. I deal with sustainability in the next section.
114. The ES refers to the remaining 75% of the fuel being transported from locations abroad including North America (Texas), Canada, Portugal and South Africa by bulk carrier 10,000 tonne ships. The Inquiry heard about other possible sources, such as the European Union and the Baltic. MQRA's witness considers that the WAG's and UK Government's policy towards biomass and large scale biomass power generation is highly flawed. In particular, that security of supply is likely to threaten large scale projects using imported biomass.⁷⁷ I have had regard to the various biomass supply reports cited by MQRA, and note that they pre-date the WAG's EPS. CAT also argues that the appellant has not undertaken due diligence with respect to security and assurance of supply, or the international cumulative impact on wood supply.
115. There is also some disagreement about whether Swansea Docks is a deep water harbour. Consultation on the Bio-energy Action Plan for Wales states that developers may wish to make use of deep water harbours in Wales to set up large power stations using imported biomass.⁷⁸ However, there is nothing to indicate that Swansea Docks would not be able to accommodate the 10,000 tonne ships cited in the ES.
116. I disagree with MQRA's submission that planning permission should be refused unless there are proven contracts in place for the proposed operation for the medium term (6-10 years). The availability and price of fuel for the proposed power station are matters that would be determined by the global market. Subject to sustainability criteria, which I come to next, supply is primarily a matter of commercial risk for the developer/operator. Security of fuel supply is not something that should necessarily undermine the credentials of this scheme as a RE

⁷⁶ Document CAT18.

⁷⁷ Document M4.

⁷⁸ Document CD10.1.

project. Especially as it would accord with the WAG's March 2010 EPS to deliver 3 kWh/d/p by 2020 from imported supply of biomass for electricity.

Sustainability of biomass fuel

117. The EA's *Biomass: Carbon sink or sinner?* warns that GHG emissions from energy generated using biomass are generally, but not always, less than from fossil fuels, depending upon such factors as how the fuel was produced, whether it involved land use changes, and energy conversion efficiency. It concludes that by 2030, which is within the design life of the proposed power station, biomass electricity will need to be produced using good practice to avoid emitting more GHG emissions per unit than the average for the electricity grid.⁷⁹
118. CAT is critical of the carbon footprint of the proposed development. It stresses the initial level of carbon debt from this form of RE.⁸⁰ It estimates that the time to reach a carbon balance between burn and neutrality varies between 64-84 years, depending upon the type of wood grown. This would be long after the design life of the proposed power station. The lag time is due to the rate replanted trees would sequester carbon. However, this analysis makes no allowance for the possibility of supply from forests that currently are, or could be, managed on a sustained yield basis.⁸¹
119. The appellant argues that the sustainability of biomass feedstock is increasingly not seen as a matter that falls within planning control, given that it is adequately regulated by another mechanism, the Renewables Obligation Credit (ROC) system, which is the responsibility of the Office of Gas and Electricity Markets (Ofgem). The appellant relies on a decision by the Secretary of State for Energy and Climate Change under Section 36 of the Electricity Act 1989 for a 100 MW biomass fuelled generating station at Avonmouth Dock.⁸² I have noted the procedural position in respect of CAT's application for judicial review of this decision.⁸³ But the decision remains valid until the courts decide otherwise.
120. The Avonmouth decision referred to the provisions of the Renewables Obligation Order 2009 (ROO), and added that the Government has also made clear that if there is evidence of significant unsustainable sourcing of biomass it will take action to prevent this. Conditions were imposed on fuel type, but it was decided that it would not be appropriate to include conditions limiting the use of biomass to certain biomass certification schemes. The decision noted that mechanisms beyond the planning system would ensure that the power station operated in a way that would conform to any new Government policy, and considered that biomass sustainability was not a ground for refusing consent.
121. The current ROO sustainability reporting, introduced in 2009, requires information to be submitted on matters like materials, country of origin, whether it is from an energy crop, or subject to a certified quality assurance scheme, along

⁷⁹ Document CD15.

⁸⁰ Documents CAT16.1 and CAT16.2.

⁸¹ I acknowledge the difficulties in defining sustainable forestry practices for any particular forest, having regard to the ecological, social and economic factors involved. I use the term 'sustained yield' in the broad sense of attaining a balance between the enduring health and productivity of the forest, and the demand for forest products.

⁸² Decision at Document A2, and Bristol City Council Committee Report at Document C11.

⁸³ Documents CAT16 and CAT17.

with the previous use of land on which it was grown.⁸⁴ However, in terms of sustainability of fuel sources, it does not set a minimum standard to be achieved. Nor does it appear to provide a statutory basis to refuse ROCs if the biomass fuel is not from a sustainable source.⁸⁵

122. This is an emerging policy area. I note the recommendation from the House of Commons Energy and Climate Change Committee that emerging national policy statement EN-3 be revised to require all biomass power station applicants to make a full assessment of the sustainability of their fuel sources.⁸⁶ Authorities have variously considered sustainability of fuel sources to be a planning matter, a pollution control issue, or a consideration to be addressed by another administrative mechanism. In the appeal before me, the SoCG includes a suggested planning condition that fuel shall be from an approved sustainable source.⁸⁷ EAW has imposed a condition on the EP for the permitted Prenergy 350 MW biomass power station at Port Talbot that wood fuel shall only be sourced from sustainable forests approved under established forest certification schemes.⁸⁸

123. However, the Government is proposing, in ROO 2011, to introduce biomass sustainability criteria. After a transition period to optimise the scheme, which is expected to end in April 2013, it is proposed that eligibility for ROCs will be made subject to generators demonstrating compliance with the sustainability criteria.⁸⁹ It seems likely that this would provide the link between sustainability and ROCs that CAT says is missing in the Avonmouth decision. Details about how the system would work are not yet available, but for CAT's submission to succeed it would be necessary for me to proceed on the basis that the proposed sustainability criteria would not be effective. I have doubts about that approach. It seems to me that there are some similarities to be drawn here with the relationship between the planning and pollution control regimes, and that the correct approach is for the planning system to operate on the basis that these other Government mechanisms for the sustainability of fuel sources would be properly applied, enforced and effective.

124. The EPS is not inconsistent with this approach. It does not represent any divergence of WAG and UK Government policy, especially as energy policy is a reserved function that is not devolved to the WAG. There is consistency of policy, and reliance on the ROC system to achieve the UK Government's aims for RE. There is some support for recognising different roles for the planning and other administrative systems in the WAG's *Practice Guidance*. This notes that not all impacts associated with RE developments fall within the control of planning, and cites the example of landscape and environmental impacts of biomass planting, and stresses the importance of a clear understanding of what planning can and cannot influence.⁹⁰

125. Some support for this view is also emerging in the direction of travel indicated in

⁸⁴ Renewables Obligation Order 2009 Article 54(3).

⁸⁵ I requested views from the parties about the ROO. These are at Documents C17, A18 and CAT19.

⁸⁶ Document C7.

⁸⁷ Document 1 Section 11.2 Condition 29. This was not repeated in the revised version later submitted to the Inquiry by the appellant at Document A7.

⁸⁸ Document CAT12. Condition 1.4.5.

⁸⁹ Statutory Consultation on the Renewables Obligation Order 2011 – at Document C17.

⁹⁰ Document CD26 paragraph 2.2.3.

the Consultation Draft for Section 12.8 of PPW.⁹¹ This provides that the sustainability of the sources of biomass fuel is not a planning consideration. However, limited weight can be given to this statement because of its draft status. It also seems to me, given that the need to reduce GHG emissions is the fundamental consideration underlying planning policy for RE provision, that the sustainability of the source of biomass fuel is capable of being a material planning consideration, which might have implications for the use and development of land. The issue is whether a grant of planning permission would ensure that any remaining sustainability concerns are capable of being dealt with under the ROC system. The appeal scheme would satisfy this requirement. It is likely that the Government's foreshadowed ROO sustainability criteria would be operative by the time the proposed power station was commissioned.

Combined heat and power (CHP)

126. The appeal scheme is described by the appellant and the Council as a combined heat and power plant. It would produce heat, but there is a dispute about whether the heat would be used. The appellant suggests a condition to deal with this, drawing on the Avonmouth decision.⁹² The three-part planning condition suggested can be summarised as follows.⁹³ Firstly, that prior to the commissioning of the power station, a CHP feasibility assessment be undertaken and approved, which included provision for the ongoing monitoring and exploration of potential commercial opportunities to use the heat as part of a Good Quality CHP Scheme. Secondly, where this identified viable opportunities for the use of the heat, to submit a scheme for, and install as approved, the provision of the necessary plant and pipework to the boundary of the appeal site. The third part, which would apply in the circumstances where no viable opportunities for use of the heat were identified under the first condition, is intended to ensure that there would be no barriers to the future supply of heat to the boundary of the appeal site.
127. However, the wording of these conditions is not agreed with the Council, which disputes that they would provide any assurance that a district heating scheme, or any other scheme, would emerge. CAT also argues that the condition is impotent, and so it would be reasonable to conclude that the heat would not be used, and so no weight should be given to the proposal as a CHP scheme. MQRA also questions the validity of use of the term CHP.⁹⁴ As a result, it is submitted that the scheme would rank low in the hierarchy, in terms of cost of carbon saving. The *UK Biomass Strategy* records biomass CHP as the second most effective in terms of cost of carbon saving, with dedicated biomass power plants fourth.⁹⁵ More recent work by the EA finds CHP utilising 100% of heat produced, in second place, with electricity production from combustion ranked fourth out of five.⁹⁶
128. Guidance for applications under Section 36 of the Electricity Act 1989 states that developers should show that they have explored fully any opportunities for existing and likely local business or community uses of heat. This requires consultation with relevant organisations, assessment of the viability of CHP and economic feasibility

⁹¹ Document CD27.

⁹² Document A2. Conditions 56 and 57.

⁹³ Document 13.2.

⁹⁴ Document M6.

⁹⁵ Document CD4.

⁹⁶ Document C9.

of any heat opportunities identified.⁹⁷ This guidance does not technically apply to the appeal scheme because it is marginally below the threshold for Section 36 applications. However, the argument that the principle should reasonably apply here has some force, especially as the appellant does not dispute that the plant was sized to just below the Section 36 threshold, and not to fit an anticipated heat demand.

129. The emerging National Policy Statement for Renewable Energy Infrastructure also includes requirements on applicants to fully explore options for incorporating CHP.⁹⁸ In addition, the WAG's *Practice Guidance* states that for large scale plants where electricity is continually fed into the grid, finding a continual use for the heat output from CHP is more difficult, and that the plant needs to be optimally-sized and operated for the heat and electricity load profiles it is serving. It adds that for CHP to be economically viable it is important to understand the heat load profile, especially for district heating networks.
130. CAT argues that this feasibility work is a pre-requisite for planning approval. In reality, I consider that it would more likely to be an iterative process, with possible users of heat needing some certainty about its supply before any serious consideration could be given to its utilisation. There is some evidence that developers are willing to engage in prior discussions about possible connections.⁹⁹ Nonetheless, meaningful negotiations, serious planning and commercial contracts would be unlikely to progress very far beyond this initial discussion stage in the absence of a grant of planning permission for the power station. The engineering design of the plant would need to be informed by the heat load that emerged from these negotiations, but this is a matter of detail that could be approved in discharging appropriate planning conditions.
131. In addition to the heat load identified on the UK Heat Map¹⁰⁰, there are extensive areas for potential redevelopment in this eastern part of Swansea. It is also proposed to develop the former BP Llandarcy Oil Refining site some 4 km to the north-east of the appeal site as an urban village, comprising some 4,000 dwellings with employment and community facilities. There is considerable scope for utilising heat from the proposed power station within the 15 km mentioned in the emerging National Policy Statement for Energy.¹⁰¹ A CHP scheme here need not be reliant upon the retrospective installation of a district heating scheme. There would also be a commercial incentive to utilise the heat with the Renewable Heat Incentive due to be implemented in 2011, and because of banding for ROCs.¹⁰² I note also the WAG's acceptance in principle of the Sustainability Committee's Recommendation 7 that the Welsh and UK Governments establish minimum heat use efficiency standards for plants and ensure, as a prerequisite to Government support, that the plant must meet these standards.¹⁰³ This is again a reference to a system that would operate beyond the planning regime. Taking all of the above into account, the Council's submission that Good Quality CHP status would never be achieved here looks pessimistic.

⁹⁷ Document CAT13.

⁹⁸ Document CD14.

⁹⁹ Document A15.

¹⁰⁰ Documents A13 and C16.

¹⁰¹ Document CD13.

¹⁰² Dedicated biomass with CHP would attract 2 ROCs, and without CHP only 1.5.

¹⁰³ Document CD28 page 7.

132. However, I am not convinced that the appellant's suggested conditions, even with the variations sought by the Council, would be adequate. Given that the appeal site is contained within the Docks, some provision would be likely to be required to deal with off-site works, either by a negative or Grampian condition, or a planning obligation. But this need not be an insurmountable obstacle. There is some support for such an approach in the WAG's statement that in the absence of an appropriate heat customer, it would not be cost effective to require that heat distribution infrastructure was an essential requirement for all power stations, but that it may be desirable for all new power stations to be CHP-ready so that new heat customers would be encouraged to establish their facilities nearby.¹⁰⁴ The prospects for securing appropriate provision for CHP, in the circumstances that apply here, would not be so remote as to warrant determining the appeal on the basis of a scheme that would only generate electricity.

Findings on the fourth main issue

133. On the fourth main issue, I do not consider that concerns about the supply of biomass fuel should necessarily detract from the RE advantages of the proposed power station. I also acknowledge reservations about the sustainability of biomass fuel sources, but measures are in progress to address this issue, outside the planning system. Whether the heat potential of the CHP scheme would ever be realised is a relevant consideration. However, I am satisfied, given the location, that opportunities to use heat from the power station would arise. Appropriate mechanisms could be devised to ensure that this potential was realised. I do not believe that these considerations are sufficient to substantially diminish or discount the significant weight that should properly be given to this RE project in accordance with relevant policy.

Other matters

Land contamination, flooding and drainage

134. Possible land contamination is an issue because of the previous uses of the appeal site, but this could be addressed by planning conditions. Flood risk and safety would also need to be a matter for conditions. Similarly, local hydrogeology would be a detailed matter for consideration by discharge of a condition. Subject to the imposition of appropriate conditions the proposal would not conflict with UDP Policies EV36, EV38 and EV35 concerning, respectively, flood risk, risk of contamination and surface water run-off.

Traffic and transportation

135. I have had regard to local concerns about additional traffic from the proposed development using Fabian Way.¹⁰⁵ Traffic flows along this route are predicted to increase, but a recent study is taking a long-term approach, over the next 25 years, towards transport provision.¹⁰⁶ The appeal site has potentially good sea, rail and road access. With the mitigation measures outlined in the ES, additional traffic from the power station would not have an unacceptable adverse effect on the highway network, or the safety of those using it.

¹⁰⁴ Document CD28 page 8.

¹⁰⁵ Documents 6 and 9.

¹⁰⁶ Document S1.

Employment provision

136. The ES refers to the scheme, after construction, creating 90 direct jobs. However, it was acknowledged at the Inquiry that the power station would be likely to give rise to a low job density. Nevertheless, even if it were to eventuate that not all the anticipated 90 jobs were created, the additional employment would be beneficial to the local economy.¹⁰⁷ The proposal would also help to maintain the long-term financial sustainability of the Port of Swansea. This would be beneficial to the region.¹⁰⁸

Other considerations

137. The Council does not consider that sufficient information is available about the likely use of water, or the energy efficiency design of the building. These are matters that could be addressed by conditions. There is also criticism about the approach to community engagement, with respect to the advice in TAN8. If there was any deficiency in this regard, I consider that the Inquiry provided an appropriate opportunity for the local community to raise any relevant matters.

138. There is local concern about air pollution from additional ships in the Docks, especially if they used bunker fuel. Residents of Aurora express concern about smoke from the ferry when the wind is from the south. However, there are restrictions on ships whilst they are within the administrative control of the port authority.

139. I have taken into account the petitions and written representations about the proposed power station at the application and appeal stages. This includes the 113 letters received by MQRA. Many of these raised issues that I have dealt with above. Some respondents are concerned about the proposed development resulting in a decline in property sales or value. However, a loss of property value in itself is not a relevant planning consideration, and would not affect the peaceful enjoyment of possessions.

Planning balance

140. I deal first with the provisions of the development plan. The amplification to UDP Policy AS12 indicates that compatibility should be assessed with regard to (1) amenity, (2) land use and (3) environmental impact. In respect of the latter, I have found that the proposal would have a significant adverse impact on the character and appearance of the area. In terms of land use, a utilitarian building of this scale with a stack 70 m high and 5 m in diameter, and with a plume at times, would contrast sharply with the nearby prestigious mixed-use development, which incorporates a quality mix of housing in a high grade environment at SA1SW. The stack would identify the appeal site and the proposed development more with the industrial land to the east of Swansea, Baglan and beyond in Port Talbot. This would be at odds with the UDP's aim for redevelopment of SA1SW to fundamentally change the image of the eastern approach to the City. I find that the appeal scheme would result in land-use conflict. A building of this scale, design and siting would isolate the eastern approach to the City from the waterfront, contrary to the aims of the spatial strategy. Taking all these factors into account, the proposal would not be compatible with nearby development areas, and so would be contrary

¹⁰⁷ Document 5.

¹⁰⁸ Document 8.

to the provisions of UDP Policy AS12.

141. UDP Policy R11 is worded so that non-compliance with any one of its provisos would bring the development into conflict with the policy. The appearance of the building by reason of its scale and location, given the local context, could not be satisfactorily incorporated into the built environment and would, by virtue of its visual intrusion, significantly adversely affect the visual amenity of the area. The proposal therefore conflicts with proviso (ii) of Policy R11. The appeal scheme is, therefore, contrary to the provisions of Policy R11, irrespective of the outcome of the balancing exercise in proviso (i). Such a balancing exercise is also implicit in PPW, and in Section 38(6) of the Planning and Compulsory Purchase Act 2004, and I turn to it next.
142. The proposed power station derives significant support by reason of the important contribution it would make to the reduction of GHG. Notwithstanding the criticisms levelled at the proposal on the grounds of security and sustainability of biomass fuel supply, along with likely heat utilisation, I consider that significant weight should be given to the RE benefits of this proposal. Particularly as it would, cumulatively, make an important contribution to achieving the WAG's aims set out in its EPS. The proposal would also contribute to the commercial viability of Swansea Docks, and the additional employment generated would be beneficial to the local economy.
143. Against this must be weighed the harm I have identified to the character and appearance of the area, and the policy conflict. The proposal would conflict with UDP Policies EV1, EV2, AS12 and R11. This would undermine achievement of the core element of the spatial strategy, which is to develop a modern, attractive and vibrant waterfront area. It would also be at odds with the sustainable settlement strategy for the UDP, which includes capitalising on the redevelopment opportunities afforded by brownfield land and the Waterfront area. This would in turn jeopardise achievement of Goal 1 and Goal 2 of the UDP, concerning a visually attractive environment, and sustainable growth, respectively.
144. The appeal site lies within an area that is considered so important that its future redevelopment should be considered with the benefit of a waterfront regeneration masterplan for the wider Swansea Bay area, prepared jointly by adjoining authorities and relevant partners to provide an overarching development framework for the area. Accordingly, substantial weight should be given to the policy conflict identified above.
145. The proposal would, for the reasons set out in this decision, harm the character and appearance of the area. The weight given to this harm should be fully cognizant of the importance here of the relationship between the City and its coastline, and the significance of environmental improvement of the eastern approach to the City in the overall planning strategy. Taking all these factors into account, the adverse impact I have identified would result in substantial harm.
146. In my judgement, the significant RE benefits of the scheme, along with the additional employment provision, would not be sufficient to outweigh the substantial harm to the character and appearance of the area, and the resultant policy conflict. I have taken into account all other matters raised in evidence, but have found nothing to outweigh the main considerations that lead to my conclusions.

Conclusions

147. Notwithstanding my favourable findings for the appellant on some of the matters before the Inquiry, including the second, third and fourth main issues, I consider that the harm to the character and appearance of the area represents a compelling objection to the proposal. The proposed development is contrary to the provisions of the development plan, and there are no other material considerations which are sufficient to outweigh the harm and policy conflict I have identified. The scheme would add to the mix of energy provision for Wales, but it would not do so whilst minimising the impact on the environment, and so the proposed development would be at odds with the aims of PPW. For the reasons given above and having regard to all other matters raised, I conclude that the appeal should be dismissed.

John Woolcock

Inspector

APPEARANCES

FOR THE LOCAL PLANNING AUTHORITY:

Peter Wadsley of Counsel	Instructed by the Solicitor, City and County of Swansea.
He called	
Stephen Knott BA DipLA CMLI	Associate Director, Cooper Partnership Ltd.
Lee Richards BSc(Hons) MRICS DipDEA	Lead Development Surveyor, City and County of Swansea.
David Williams DipTP MRTPI	Team Leader Economic and Spatial Development Section of Regeneration Team, City and County of Swansea.
Colin Godfrey BSc CEng MEI	Managing Director of CLG Energy Consultants.
Tanya Nash BSc MSc	Sustainable Development Team Leader, City and County of Swansea.
Richard Jones BA(Hons) BTP MRTPI	Major Applications Team Leader, City and County of Swansea.

FOR THE APPELLANT:

Gwion Lewis of Counsel	Instructed by Benson Watkins Solicitors.
He called	
Ruth Mauritzen BSc(Hons) MLA CMLI	Associate Director, AECOM Ltd.
Dr Alison Searl BSc(Hons) PhD MEnvS	Director of Analytical Services at the Institute of Occupational Medicine.
Michele Hackman BSc MSc FRMetS MIAQM MEnvSc	Air Quality Specialist Technical Director, AECOM Ltd.
Andrew Hunt BSc M European Economics FRSA	Director of Hunt Dobson Stringer Ltd.
Peter Walker BA(Hons)	Director of EcoCentroGen Ltd.
Brian Mark CEng CBiol MinstBiol FRSA FCIBSE	Director of Fulcrum Consulting.
Daniele Fiumicelli MSc IoA CIEH	Technical Director, AECOM Ltd.
Richard Graves BSc MSc Dip MIEEM CEnv	Director of Ecology, AECOM Ltd.
David Davies MSc LLB DipTP DipLD MRTPI MRICS	Director of PARC, Planning Architectural and Regeneration Consultancy.

FOR COEDBACH ACTION TEAM RULE 6(6) PARTY:

Richard Kimblin of Counsel	Instructed by Morgan La Roche Solicitors.
He called	
Robin Cammish BSc(Hons) Grad Dip P+S FCIPS	Chairman Coedbach Action Team Ltd.
Dr Matthew Ireland BSc PhD MIAQM	Chartered Environmentalist, MNA Advisory Ltd.
Richard Rees BSc(Hons) MPhil MRICS	Director of Savills (L&P) Ltd.
David Gravell HND	Dairy farmer.
Chris Cammish BSc(Hons)	Supply Chain Programme Manager.
Ronald Howells	Retired Civil Servant.
Robin Williams BTP Dip Surveying MRTPI MRICS	Managing Director of Asbri Planning Ltd.

FOR MARITIME QUARTER RESIDENTS' ASSOCIATION RULE 6(6) PARTY:

Jan Lewis	Local resident, Chair of MQRA.
Phil Lake	Local resident.
Peter East BSc Estate Management	Local resident.
Keith Evans BA(Hons) DipIntM Cert TESOL	Local resident, member Aurora Swansea Residents' Association and Secretary of MQRA.
Dawn Lyle	Managing Director of iCreate Ltd.
Anthony McGetrick	Chairman of Tourism Swansea Bay Ltd.
Dr Dai Lloyd AM	Member National Assembly for Wales.
Peter Wilson BEng MSc	Member of the PT/RAPS Action Group against the Prenergy Plant.
Prof Iwan Davies	Pro Vice Chancellor, Swansea University.
Cllr Veronyca Bates Hughes BA (Open) Earth Science	Ward Councillor, City and County of Swansea.

FOR SA1 RULE 6(6) PARTY:

Cllr Harry Bebell	Councillor for Coedffranc West, Neath Port Talbot Council.
Elaine Thomas	Local resident.
Mervyn Jones	Local resident.
Corrine McGill	Local resident.
Alan Richards	Local resident.

FOR SWANSEA CIVIC SOCIETY RULE 6(6) PARTY:

Phillipa Watkins	Honorary Secretary, Swansea Civic Society.
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INTERESTED PERSONS:

For the proposed development

Gareth Jones	Regional Officer, Unite the Union.
John Discombe	Retired Formerly Chartered Engineer and Member Institute of Materials, Minerals and Mining.
Matthew Kennerley	Associated British Ports.

Against the proposed development

Malcolm Ridge	Chairman Gower Society.
Peter Black AM	Welsh Assembly Member.
Valerie Lloyd AM	Welsh Assembly Member.
Gerard Crowley	Local resident.
Patricia Brown	Local resident.
Tony Young	Representing Swansea Green Party.
Cllr David Phillips	Ward Councillor, City and County of Swansea.
Matthew Smith	Director of GoWake.

DOCUMENTS SUBMITTED AT THE INQUIRY

- Document 1 Statement of Common Ground, including suggested conditions, dated 19 May 2010.
- Document 2 Statement by Peter Black AM.
- Document 3 Statement by Valerie Lloyd AM.
- Document 4 Statement by Gerard Crowley.
- Document 5 Statement by Gareth Jones on behalf of Unite the Union.
- Document 6 Statement by Patricia Brown.
- Document 7 Statement by John Discombe.
- Document 8 Statement by Matthew Kennerley on behalf of Associated British Ports.
- Document 9 Statement by Cllr David Phillips.
- Document 10 Plans for The Bay Science and Innovation Campus, Swansea University. [requested by Inspector]
- Document 11 Statement by Matthew Smith.
- Document 12 Statement by Corienne McGill.
- Document 13.1 Schedule of suggested conditions with comments.
- 13.2 Notes on CHP conditions by Council and appellant.
- Document 14 Plans for residential development at Plot D9 SA1SW, April 2010. [application cited by David Davies and plans requested by Inspector]

Submitted by the Council

- Document C1 Opening statement on behalf of the City and County of Swansea.
- Document C2 Clarification of annotated Viewpoint J by Stephen Knott.
- Document C3 Plan showing boundary of Gower Area of Outstanding Natural Beauty.
- Document C4 Correspondence dated 8 May 2007 and 6 July 2007 concerning scoping for EIA.
- Document C5 Plan showing SA1: Progress.
- Document C6 Aerial photographs of other power plants.
- Document C7 Extract from *The proposals for national policy on statements on energy*, House of Commons, Energy and Climate Change Committee, March 2010.
- Document C8 Extract from Eastcroft appeal report - Ref:APP/Q3060/A/08/2063129.
- Document C9 *Developing a hierarchy for biomass use*, Environment Agency, February 2010.

- Document C10.1 CBI News Release, *CBI Response to Industrial Emissions Directive vote*, May 2010.
- C10.2 European Parliament Press Release, *Industrial emission limits: extra time for combustion plants to comply*.
- Document C11 Bristol City Council, Development Control Committee – 13 May 2009. Application for biomass fired electricity generating plant at Avonmouth Docks
- Document C12 Comments of the City and County of Swansea relating to the proposed unilateral undertaking and conditions, including extract from appellant’s first draft of SoCG and track changes/comments on legal drafting aspects, emails 16 and 22 September 2010.
- Document C13 Planning permission Application No:2008/0996 variations of conditions for SAI Swansea Waterfront, including revised masterplan Fig.A2.1.
- Document C14 Statement by Richard Jones on recent changes to Welsh Policy. Including the Council’s response to Consultation Questions re Section 12-8 Planning for Renewable Energy.
- Document C15 Note by the Council about accuracy of Cross Sections at Document A17.
- Document C16 Heat map search results and plan.
- Document C17 Council’s response to Inspector’s letter of 18 October 2010. Including Statutory Consultation on the Renewables Obligation Order 2011.
- Document C18 Closing statement.

Submitted by the appellant

- Document A1 Opening submissions on behalf of the appellant.
- Document A2 Department of Energy and Climate Change, decision dated 26 March 2010, concerning biomass fuelled generating station at Avonmouth Dock.
- Document A3 Technical Note: Landscape and Visual Assessment, including Table 1: Visual impact of the revised design.
- Document A4 Briefing Note by Daniele Fiumicelli on *WHO Night Noise Guidelines for Europe*. [requested by Inspector]
- Document A5 Extract from letters of objection cited in Council report, dated 29 July 2008.
- Document A6 Extract from *The Coalition: our programme for government*. HM Government, pages 11, 12, 16 and 17.
- Document A7 Further conditions proposed by the appellant.
- Document A8 Extract from *IPPC Sector Guidance Note Combustion Activities* page 57.
- Document A9 Air Quality Evidence of Michele Hackman – Note 2.

- Document A10 Replacement Figure 2.2 Andrew Hunt's Appendix 2 with table of development in the locality of the Eastcroft plant.
- Document A11 Plan of Swansea Docks and aerial photographs of other plants in Nottingham, Lewisham, Southampton and Sheffield, showing 500 m and 1500 m distances.
- Document A12 Extract from *A White Paper on Energy*, DTI may 2007.
- Document A13 Extract from UK Heat Map.
- Document A14 Addendum to the Proof of Evidence by David Davies, dated 6 October 2010.
- Document A15 Letter from Coastal Housing Group to appellant, re connection of a district heating network, dated 28 July 2009.
- Document A16 Draft suggested noise conditions by Daniele Fiumicelli.
- Document A17 Cross sections. [requested by Inspector]
- Document A18 Supplementary note by Brian Mark in response to Inspector's letter dated 18 October 2010.
- Document A19 Closing submissions.
- Document A20 Application for costs.

Submitted by Coedbach Action Team

- Document CAT1 Opening statement on behalf of Coedbach Action Team.
- Document CAT2 Photographs of Lockerbie power plant.
- Document CAT3 Compilation of ecology documentation, including correspondence from CCW.
- Document CAT4 Increased wheeze but not bronchial hyper-reactivity near power stations, *J. of Epidemiology and Community Health* 1993, 47:282-286.
- Document CAT5 A Retrospective Assessment of Mortality from the London Smog Episode of 1952: The Role of Influenza and Pollution. *Environmental Health Perspectives*, Vol. 112, No.1 January 2004.
- Document CAT6 Extract from web page WHO Short Guides, Health Impact Assessment (HIA).
- Document CAT7 *Health Impact Assessment International Best Practice Principles*, Special Publication Series No.5, September 2006.
- Document CAT8 *Introducing health impact assessment (HIA): Informing the decision-making process*, NHS Health Development Agency 2002.

Document	CAT9	Air Quality Documentation, including extracts from EA's Horizontal Guidance Note H1, and Appendix 7 of Assessment of new PIR permissions under the Habitats Regulations produced by the EA, and plan showing location of receptors.
Document	CAT10	Extract from <i>Local Air Quality Management Technical Guidance</i> LAQM.TG(09), February 2009, page 1-9.
Document	CAT11	An overview of development at SA1 Swansea Waterfront by Richard Rees.
Document	CAT12	Pollution Prevention and Control (England and Wales) Regulations 2000, Permit number BP3936LS – Prenergy Power Ltd, Port Talbot Docks. [requested by Inspector]
Document	CAT13	Guidance on background information to accompany notifications under Section 14(1) of the Energy Act 1976 and applications under Section 36 of The Electricity Act 1989, DTI December 2006.
Document	CAT14	Extract from <i>Ports in Wales</i> , House of Commons Welsh Affairs Committee, 27 October 2009.
Document	CAT15	Draft proposed planning conditions on behalf of CAT, 15 September 2010.
Document	CAT16	Letter from Morgan La Roche dated 8 October 2010 re application for judicial review of Avonmouth decision.
	CAT16.1	<i>Biomass Sustainability and Carbon Policy Study</i> , Manomet Center for Conservation Sciences, June 2010.
	CAT16.2	<i>The upfront carbon debt of bioenergy</i> , Executive Summary, Joanneum Research, May 2010.
Document	CAT17	Note re Judicial Review of Avonmouth decision.
Document	CAT18	Extracts from <i>Inquiry into the Supply and Demand for Woody Biomass</i> , Sustainability Committee, National Assembly for Wales, July 2010.
Document	CAT19	Note about Renewables Obligation Order 2009.
Document	CAT20	Closing submissions.
	CAT20.1	J. Planning & Environment Law 2000, Case Comment, ADT Auctions Ltd v SSETR [2000] J.P.L. 1155 (QBD).
	CAT20.2	Waddenzee, Judgment of the Court, September 2004.

Submitted by MQRA

- Document M1 Opening statement of the Maritime Quarter Residents' Association.
- Document M2 Email dated 19 May from Peter Wilson to Jan Lewis with examples of slide presentation.
- Document M3 Photographs 1-6 submitted by Keith Evans.
- Document M4 Slide presentation by Peter Wilson.
- Document M5 Conditions suggested in addition to those proposed by the Council, dated 28 August 2010.
- Document M6 Statement by Michael Wiseman.
- Document M7 Statement by Christopher Hope.
- Document M8 Statement by Elizabeth Grace.
- Document M9 Closing statement.

Submitted by SA1

- Document S1 Email concerning watersports in Swansea Bay, and newspaper extract concerning traffic on Fabian Way, submitted by Mervyn Jones.
- Document S2 Closing statement.

Submitted by Swansea Civic Society

- Document SCS1 Statement by Prof Herbert [read by Phillipa Watkins]
- Document SCS2 Closing statement.

SCHEDULE OF PLANS

- Drawing Nos.5748(P)01F, 02G, 03H, 04D, 05, 06rev5 and 07rev3.
- Drawing Nos.52902MALH/GA/001-P6, 500/001-P2, 500/002-P2.

CORE DOCUMENTS

CD1	<i>The UK Low Carbon Transition Plan, 2009.</i>
CD2	<i>The UK Renewable Energy Strategy, 2009.</i>
CD3	<i>Digest of UK Energy Statistics 2009, chaps 5, 6 and 7, DECC.</i>
CD4	<i>UK Biomass Strategy, 2007, DTI, DfT Defra.</i>
CD5	<i>Annual Statement of Emissions for 2008, DECC.</i>
CD6	<i>20 20 by 2020 Europe's climate change opportunity, COM(2008) 30.</i>
CD7	Directive 2009/28/EC on the promotion of the use of energy from renewable sources.
CD8	Report on sustainability requirements for the use of solid and gaseous biomass sources in electricity, heating and cooling, COM(2010).
CD9	<i>Greenhouse gas emissions trends and projections in Europe 2009. EEA Report No.9/2009.</i>
CD10.1	<i>Consultation on a Bioenergy Action Plan for Wales, February 2009, Welsh Assembly Government.</i>
CD10.2	<i>Response to the Consultation on a Bioenergy Action Plan for Wales, December 2009, Welsh Assembly Government.</i>
CD11	<i>Renewable Energy Route Map for Wales, 2008, Welsh Assembly Government.</i>
CD12	<i>A low carbon revolution – The Welsh Assembly Government Energy Policy Statement, March 2010, Welsh Assembly Government.</i>
CD13	<i>Draft Overarching National Policy Statement for Energy (EN-1), November 2009, DECC.</i>
CD14	<i>Draft National Policy Statement for Renewable Energy Infrastructure (EN-3), November 2009, DECC.</i>
CD15	Executive Summary from <i>Biomass: Carbon sink or carbon sinner?</i> Environment Agency, April 2009.
CD16	<i>One Wales: One Planet The Sustainable Development Scheme of the Welsh Assembly Government, May 2009.</i>
CD17	<i>People, Places, Futures The Wales Spatial Plan, 2008 update.</i>
CD18	Ministerial Interim Planning Policy Statement 01/2005, <i>Planning for Renewable Energy.</i>
CD19	TAN8: <i>Planning for Renewable Energy.</i>
CD20	City and County of Swansea Unitary Development Plan, adopted November 2008.
CD21	<i>Port Tawe and Swansea Docks, Supplementary Planning Guidance, adopted September 2002.</i>
CD22	<i>Swansea City Centre Strategic Framework.</i>

CD23	<i>SA1 Swansea Waterfront Design and Development Framework, August 2004 Version 5.</i>
CD24	Extract from <i>Guidelines for Landscape and Visual Impact Assessment</i> published by the Landscape Institute and the Institute of Environmental Management and Assessment, 2002.
CD25	<i>Using science to create a better place: Minimising greenhouse gas emissions from biomass energy production</i> , Environment Agency, April 2009.
CD26	<i>Practice Guidance: Planning Implications of Renewable and Low Carbon Energy</i> , Welsh Assembly Government, July 2010.
CD27	<i>Consultation Document: Planning Policy Wales – Section 12.8 Planning for Renewable Energy</i> , Welsh Assembly Government, 16 July 2010.
CD28	Written Response by the Welsh Assembly Government to the Sustainability Committee Report: Inquiry into the Supply and Demand for Woody Biomass, SC(3)-19-10 Paper 3. [About which the Inspector invited comments during the adjournment]
CD29	Welsh Office Circular 23/93 <i>Awards of Costs Incurred in Planning and Other (including Compulsory Purchase Order) Proceedings.</i>
CD30.1	Agreed note between the appellant and the local planning authority on the relative roles of the planning and pollution control regimes, 16 April 2010.
CD30.2	Second agreed note between the appellant and the local planning authority in relation to the Habitats Regulations 2010, 29 April 2010.

ABBREVIATIONS

AA	Appropriate Assessment pursuant to Habitats Regulations
AERMOD	American Meteorological Society/Environmental Protection Agency Regulatory Model
AONB	Gower Area of Outstanding Natural Beauty
AQMA	Air Quality Management Area
BAT	Best Available Techniques
BS4142	British Standard 4142: 1997 <i>Method for rating industrial noise affecting mixed residential and industrial areas</i>
CAT	Coedbach Action Team [Rule 6(6) party]
CCW	Countryside Council for Wales
CHP	Combined heat and power
CO	Carbon Monoxide
EA	Environment Agency
EAW	Environment Agency Wales
EIA	Environmental Impact Assessment
EP	Environmental Permit issued by Environment Agency Wales
EPS	WAG's Energy Policy Statement <i>A low Carbon Revolution</i> March 2010
ES	Environmental Statement
GHG	Greenhouse Gases
GLVIA	<i>Guidelines for Landscape and Visual Impact Assessment</i> , Landscape Institute
HCl	Hydrogen Chloride
HIA	Health Impact Assessment
LCZ	Landscape Character Zone
MIPPS	Ministerial Interim Planning Policy Statement 01/2005
MQRA	Maritime Quarter Residents' Association [Rule 6(6) party]
NO ₂	Nitrogen Dioxide
NO _x	Oxides of Nitrogen
Ofgem	Office of Gas and Electricity Markets
O ₃	Ozone
PAH	Polycyclic aromatic hydrocarbons
PM ₁₀ and PM _{2.5}	Particulate matter smaller than 10 microns and 2.5 microns
PPC	Pollution Prevention and Control Permit
PPW	<i>Planning Policy Wales</i> , July 2010
<i>Practice Guidance</i>	WAG's <i>Practice Guidance – Planning Implications of Renewable and Low Carbon Energy</i> , July 2010
RE	Renewable energy
ROC	Renewables Obligation Credit
ROO	Renewables Obligation Order
SA1	SA1 Residents' Action Group [Rule 6(6) party]
SA1SW	SA1 Swansea Waterfront
SAC	Special Area of Conservation
SoCG	Statement of Common Ground between Council and appellant
SO ₂	Sulphur Dioxide
SPG	Supplementary Planning Guidance <i>Port Tawe and Swansea Docks</i> , adopted September 2002

Continued -

SRC	Short rotation coppice
SSSI	Site of Special Scientific Interest
TAN5	Technical Advice Note 5: <i>Nature Conservation and Planning</i>
TAN8	Technical Advice Note 8: <i>Planning for Renewable Energy</i>
TAN11	Technical Advice Note 11: <i>Noise</i>
UDP	The City and County of Swansea Unitary Development Plan, adopted in November 2008
WAG	Welsh Assembly Government
WHO	World Health Organisation
WSP	Wales Spatial Plan <i>People, Places, Futures</i>
