



Enviroparks Hirwaun

design and access statement

October 2008





Design and Access Statement **CONTENTS**

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Chapter One **INTRODUCTION**

PURPOSE OF THIS DOCUMENT

1.1 This design and access statement supports a planning application by Enviroparks (Hirwaun) Ltd (EHL) for a waste recovery and energy production plant at Fifth Avenue on the Hirwaun Industrial Estate, near Hirwaun in South Wales.

THE APPLICANT: ENVIROPARKS (HIRWAUN) LTD

1.2 EHL is an energy company that has developed a concept of co-locating waste recycling, energy recovery and associated commercial operations on the same site or 'park'. The company's approach is to recycle diverse waste streams using integrated advanced technologies to maximise recycling and energy generation with the minimum residual waste and environmental impact.

1.3 EHL is working in partnership with several specialist technology providers to deliver its aims. The combination of technologies brought together by EHL is designed to ensure high levels of efficiency with regard to fuel preparation and electricity production. These technologies are intended to represent Best Available Techniques for the functions they serve.

FORM AND CONTENT OF THE PLANNING SUBMISSION

1.4 EHL is applying to the two local planning authorities, the Brecon Beacons National Park Authority and Rhondda Cynon Taff County Borough Council (BBNPA and RCTCBC,) for planning permission for the following, which is illustrated in the proposed site plan at figure 1.1:

Development of a sustainable waste resource recovery and energy production park comprising 27,562 m² of buildings and structures, including a 10,240 m² building for use class B1 / B2 use; process buildings; a gatehouse and weighbridge; a visitor centre and administration building; a 20 MW_e net capacity combined heat and power plant; with a 40 m ventilation stack; external anaerobic digestion, liquid and gas holding tanks; 30,352 m² of internal roads and hardstandings; vehicular parking; external security lighting; 17,497 m² of landscaping; vehicular ingress and egress from Fifth and Ninth Avenues, and associated utilities infrastructure.



1.5 The planning application is accompanied by the following documents:

- **Environmental statement.** The project requires environmental impact assessment (EIA), which is a systematic process to identify, predict and evaluate the effects of proposed actions and projects on the environment. The findings of the EIA are reported in an environmental statement, which forms a part of the environmental information to be taken into account by the planning authority in assessing the likely environmental consequences of granting planning permission for a proposed scheme.
- **Planning policy statement.** This document contains a review of policy that is of relevance to the EHL scheme, focussing upon development plan policy but also including relevant energy, waste, environmental and economic policy at the international, national and local levels.
- **Design and access statement.** This is the current document, the purpose and content of which will now be explained.

INTEGRATION OF DESIGN AND ACCESS STATEMENT

1.6 This statement has been prepared for the EHL scheme in line with the Welsh Assembly Government's technical Advice Note 12: *Design* (TAN12), para. 4.8 of which advises that:

'Design Statements should be submitted with all planning applications for development which have design implications including applications for new or extended buildings and infrastructure and changes to landscape appearance.'

1.7 There is also a requirement for most planning applications and applications for listed building consent in Wales to be accompanied by an Access Statement. The Welsh Assembly Government (WAG) makes the following references to legislation¹:

'The relevant primary legislation is section 42 of the Planning and Compulsory Purchase Act 2004 which is commenced by SI 2007/1369 C.58. A new Article 4D to the Town and Country Planning (General Development Procedure) Order 1995, and a new Regulation 3B to the Planning (Listed Buildings and Conservation Areas) Regulations 1990 are made by amending legislation SI 2006/3390 W.310 and SI 2006/3316 W.30.'

1.8 Interim guidance published by WAG² states that access statements:

'should be combined with design statements in an integrated statement, but access matters should be clearly identified as meeting statutory requirements.'

¹ <http://wales.gov.uk/topics/planning/developcontrol/accesstatements?lang=en>

² <http://wales.gov.uk/docrepos/40371/403823112/40382/40382/developmentcontrol/inclusivedesignfina?lang=en>



1.9 This document has therefore integrated consideration of access with design in a single design and access statement.

STRUCTURE OF THIS DOCUMENT

1.10 Guidance on the preparation of design and access statements includes the following.

- Design and Access Statements in Wales: Why, What and How (DCFW, October 2008);
- Guidance for Sustainable Design in the National Parks of Wales (October 2008);
- Advisory Guidance Note on Design Statements (RCTCBC, August 2007);
- TAN12: Design.

1.11 No single approach is formally imposed by the above: the content and the level of detail required in design and access statements varies depending upon the scale and type of development proposed. However, the RCTCBC guidance note advises that statements should contain four distinct sections, and chapters 2-6 of this document are accordingly set out in this form:

- understanding the policy context
- understanding the site and context
- setting the design objectives
- producing the design solution

1.12 The detailed content of each chapter has been directly informed by the other guidance documents referred to above, and these are cross-referenced below where relevant.





Chapter Two UNDERSTANDING THE POLICY CONTEXT

INTRODUCTION

2.1 The purpose of this chapter, in accordance with RCTCBC's guidance³, is to outline and assess the design policy framework for the planning application. Commentary is provided in terms of how the EHL scheme has responded to these policies, and the substantive description of the design approach is given in chapters 3-6.

2.2 A separate Planning Policy Statement accompanying this application also provides a comprehensive review of development plan policy and other guidance taken into account by EHL in the formulation of its proposals, encompassing all areas of policy relevant to the Enviroparks development including design.

NATIONAL DESIGN POLICY

Planning Policy Wales

2.3 Planning Policy Wales (PPW) sets out the planning objectives of the Welsh Assembly Government (WAG). Underpinning the document is an approach of 'Planning for Sustainability', in line with WAG's duties under Section 121 of the Government of Wales Act 1998. The section most specifically relating to design is 2.9 – '*promoting sustainability through good design*', which has since been cancelled and replaced by Ministerial Interim Planning Policy Statement (MIPPS) 01/2008 – '*Planning for Good Design*'.

2.4 Design is taken by this MIPPS to mean '*the relationship between all elements of the natural and built environment*⁴', and its overall emphasis is upon sustainability in development, which should take into account not only aesthetics and environmental impacts but also social and economic factors such as quality of life, social inclusion, and attracting business and investment.

2.5 A range of more specific objectives of good design are also set out which include the following:

- inclusivity;
- efficient use of resources, energy efficiency and reducing waste and pollution;
- addressing the causes and effects of climate change;

³ Advisory Guidance Note on Design Statements (RCTCBC, August 2007), Page 4

⁴ Paragraph 2.9.1



- flexibility and mixed-use design;
- environmental quality (including biodiversity, air quality, and water);
- quality in the appearance of development
- protecting and promoting distinctiveness (particularly in national parks, AONBs, and conservation areas);
- accessibility for all;
- crime prevention and reduction;
- reinforcement of civic pride and 'sense of place'.

2.6 More specifically, the MIPPS states the following requirements of design and access statements:

'In preparing design and access statements, applicants should take an integrated and inclusive approach to sustainable design, proportionate to the scale and type of development proposal. They should be 'living' documents which deal with all relevant aspects of design throughout the process and the life of the development, clearly stating the comprehensive design principles adopted and include illustrative material in plan elevation and section where relevant.'

2.7 In accordance with the above, this design and access statement is clearly structured and encompasses all relevant aspects of design.

Technical Advice Note 12: Design

2.8 TAN 12 expands upon Planning Policy Wales and is the principal source of design guidance in Wales. Its approach is broad, setting out nine major objectives⁵, instead of relying upon prescriptive standards:

1. *achieving sustainable design solutions which represent best value by making prudent use of natural resources, incorporate sustainable energy use, waste control measures and provide the means for effective long-term maintenance, efficient operation and management;*
2. *sustaining or enhancing character in townscape and landscape by responding to and reinforcing, where appropriate, locally distinctive patterns and form of development, landscape, culture and biodiversity;*
3. *promoting innovative design in buildings, infrastructure, urban and rural landscape and public art;*
4. *promoting a successful relationship between public and private space through clear boundaries, acknowledging established building lines in new development and enclosure of space;*
5. *promoting high quality in the public realm by ensuring attractive, safe public spaces and routes which are fit for purpose and meet the needs of all members of society; ensuring ease of access for all by adopting inclusive design principles including safe and clear connections, integrating development with existing footpaths, cycle ways and public and private transport infrastructure and by ensuring adequate provision for people with disabilities and others;*

⁵ Paragraph 3.12



6. *ensuring ease of access for all by adopting inclusive design principles including safe and clear connections, integrating development with existing footpaths, cycle ways and public and private transport infrastructure and by ensuring adequate provision for people with disabilities and others;*
7. *promoting legible development that includes easily recognisable and understood features and landmarks;*
8. *designing for change by promoting adaptable development that can respond to social, technological, economic and environmental conditions over time; and*
9. *promoting quality, choice and variety through lifting the standard of all development, by promoting mixed use and or density of development that assists viability and responds to local needs.*

2.9 Chapters 3-6 of this design and access statement will demonstrate how the EHL scheme complies with these elements of good design.

LOCAL DESIGN POLICY

Overview

2.10 The application site lies on the boundary between two local planning authorities, and the development plan thus comprises the following:

For the south-eastern part of the site:

- The Mid Glamorgan (Rhondda Cynon Taff County Borough) Replacement Structure Plan 1991-2006 (adopted January 1999).
- Rhondda Cynon Taf (Cynon Valley) Local Plan (adopted January 2004).

For the north-western part of the site:

- Brecon Beacons NPA Local Plan (adopted May 1999);
- Brecon Beacons NPA UDP (approved for development control purposes in 2007 but not formally adopted).

The Mid Glamorgan (Rhondda Cynon Taff County Borough) Replacement Structure Plan 1991-2006 (adopted January 1999).

2.11 This plan contains no policies specific to design *per se*. However, several policies emphasise that development proposals should avoid detriment to the environment and to local amenity. These issues are explored in detail within the separate *Planning Policy Statement* accompanying EHL's application and in relevant thematic chapters of the *Environmental Statement*.



Rhondda Cynon Taff (Cynon Valley) Local Plan 1991-2006

2.12 Appendix 1 to the RCTCBC Advisory Guidance Note on Design Statements (2007) lists those policies of the local plan that are potentially relevant to design statements. For clarity these are all listed below, and those which are not considered applicable to the EHL scheme are shown in strikethrough text:

- ENV1: Development control criteria
- ENV3: Sites close to national park
- ~~ENV4: Existing buildings in the countryside~~
- ENV5: Crime prevention
- ~~ENV9: Extensions and alterations~~
- ~~ENV10: Shopfronts~~
- ~~ENV12: Grills and shutters~~
- ENV18: Access for all
- ENV23: Energy efficient design
- ~~H3: Large residential schemes~~
- ~~H6: Low density character areas~~
- ~~CON9: Development in Conservation Areas~~
- ~~CON10: Setting of Listed Buildings~~
- ~~CON11: Listed Buildings~~
- ~~URB2: Town centre enhancement~~
- ~~TP11: Environmental improvements [town centres]~~

2.13 Local plan policy ENV1 applies the following criteria:

- 1). *The proposed development is compatible with surrounding land uses, particularly with regard to the generation of noise, smell, traffic and other nuisances;*
- 2). *The provision of adequate privacy standards in relation to adjoining properties;*
- 3). *The provision of satisfactory access, servicing and parking arrangements, including provision for pedestrians, cyclists and the disabled.*
- 4). *That the siting, scale, layout, design, landscaping and use of materials of all elements of the proposal, including any internal roads, car parking, footpaths and open spaces, are of a high quality and will provide an interesting environment that is appropriate to its setting.*
- 5). *The proposal would not harm the character or appearance of the area.*

2.14 In terms of criterion (1) it is considered that the existing industrial and business uses surrounding the site within the Hirwaun Industrial Estate are compatible with the proposals. The external effects of EHL's operations would be akin to conventional use class B1 or B2 activities. In response to criterion (2), the privacy of the nearest residential properties would be not be compromised given their considerable distance from the application site. The requisite infrastructure, in line with conventional standards, is provided in the scheme in order to meet criteria (3) and (4), including parking spaces, bicycle spaces, footpaths and accessible entrances. In terms of criterion (5), the overall impression that EHL aspires to is a well-integrated business park exceeding the design standards generally associated with an allocated industrial estate site. The cumulative success of this approach is illustrated in the panoramic photomontages provided at figure 2.1.



2.15 Local plan policy ENV3 requires particular sensitivity in the design of developments that are visible from the Brecon Beacons National Park. EHL's response is described in detail in later chapters of this document and in the landscape chapter of the *Environmental Statement*. In summary, it is proposed that the Envioparks development will comprise attractive buildings in a landscaped setting, with structures of a more industrial nature, such as the anaerobic digester tanks, positioned towards the centre of the site so that they can be screened by proposed buildings.

2.16 Policy ENV5 requires the developers of 'large projects' to incorporate measures aimed at reducing the risk of crime. In response, EHL proposes that in order to provide natural surveillance over the site, process units are inward facing, with doors and windows appropriately located. In addition the two separate areas of the site are each securely fenced. The site will be subject to CCTV monitoring.

2.17 Policy ENV18 relates to public buildings and accessibility, requiring the needs of disabled people to be catered for. This policy has been taken into account in the visitor centre in the south-east part of the Envioparks site.

2.18 Policy ENV23 is supportive of appropriate design solutions that improve energy efficiency. The Envioparks scheme clearly supports this objective, being designed to meet a BREEAM 'excellent' standard, and incorporating energy recovery.

Brecon Beacons Authority-Approved UDP - 2007

2.19 This document, and not the 1999 Local Plan, is considered by the NPA to be a more up-to-date basis for making development control decisions despite having not been formally adopted. Its key policy on design matters is G6, which promotes visually attractive, accessible and sustainable development. In full the policy reads as follows:

Policy G6: Design

Applications for development will be expected to meet the WAG's key design objectives and respond to the local context. Proposals will be required to demonstrate where appropriate how they:

- i) achieve sustainable design solutions representing best value by making prudent use of natural resources, incorporate sustainable energy use and waste control measures and provide the means for effective long-term maintenance, efficient operation and management;*
- ii) sustain or enhance character in townscape and landscape by responding to and reinforcing, where appropriate, locally distinctive patterns and form of development, landscape, culture and biodiversity;*
- iii) promote innovative design in buildings, infrastructure, urban and rural landscape and public art;*
- iv) promote a successful relationship between public and private space by delineating clear boundaries, acknowledging established building lines in new development and enclosing space;*
- v) promote high quality in the public realm by ensuring attractive, safe public spaces and routes which are fit for purpose and meet the needs of all members of society;*



- vi) *ensure ease of access for all by adopting inclusive design principles including safe and clear connections, integrating development with existing footpaths, cycle ways and public and private transport infrastructure and by ensuring adequate provision for people with disabilities and others;*
- vii) *promote 'legible' development that includes easily recognisable and understood features and landmarks;*
- viii) *design for change by promoting adaptable development that can respond to social, technological, economic and environmental conditions over time; and*
- ix) *promote quality, choice and variety by lifting the standard of development, by promoting mixed use and densities of development that assist viability and respond to local needs.*

2.20 As the following chapters explain, the EHL scheme is intended to be an exemplar of sustainable resource recovery and construction, providing a comprehensive and integrated approach to waste minimisation and clean energy production, whilst causing no harm to its setting and making a positive contribution to Hirwaun Industrial Estate in design terms. This positive approach is illustrated at figure 2.2, which provides photo-realistic visualisations of the completed scheme from several viewpoints.

Guidance for Sustainable Design in the National Parks of Wales (2008)

2.21 This document is a manual to assist applicants in the preparation of design and access statements, and sets out the National Park Authority's expectations for construction materials and performance. It is also intended to ensure that planning applications are determined in an informed manner. The guidance sets out six 'key principles of sustainable design':

1. energy
2. materials and resources
3. water use
4. landscape and biodiversity
5. place and local distinctiveness
6. robust building

2.22 Consideration of the above principles has been central to the concept and design of EHL's proposals and chapter four of this document is structured around them.



Chapter Three UNDERSTANDING THE SITE AND CONTEXT

LOCATION

3.1 The planning application site lies within the Hirwaun Industrial Estate, to the north of the A465 'Heads of the Valley' east-west trunk road, close to its junction with the A4059 / A4061 north-south route between Brecon and the Rhondda Valley. Road access to the site is gained from the A465(T) Heads of the Valley road via the A4061 Rhigos Road, which leads onto Fifth Avenue. The site has existing road accesses from Fifth Avenue to the south and Ninth Avenue to the east. These are currently sealed to deter unauthorised access. A map of the site and area is provided at figure 3.1.

SETTLEMENTS

3.2 The nearest large settlements in the area are Merthyr Tydfil, 11 km to the east, and Aberdare, 7 km to the south-east. Local settlements include Hirwaun, 2 km to the south-east of the site, the village of Penderyn 2 km to the north-north-east, and Rhigos, which lies 1.7 km to the south-west of the application site. There are isolated smaller dwellings closer to the site, and two hotels.

THE IMMEDIATE SURROUNDINGS

3.3 The site is located in an area of varied terrain. Whereas the Hirwaun Industrial Estate occupies a generally level area of land, the land rises gently to the south and east, and more steeply to the east and north. Established land uses in the locality are also diverse, with a variety of manufacturing, storage and waste reclamation activities taking place on the industrial estate itself, and with a large area to the south-east of the industrial estate occupied by the workings of the former Tower Colliery, a coal mine that closed in 2008. Across Ninth Avenue from the application site stands a large industrial complex operated by Eden Industries. On the southern side of Fifth Avenue to the south-east of the site there is a waste wood processing and storage yard. The area to the north and west of the planning application site is more rural in character, comprising woodlands and well-defined fields used for pasture.

3.4 This urban-rural distinction is reflected in local authority boundaries, and it happens that the boundary between Rhondda Cynon Taf County Borough Council (RCT-CBC or 'RCT') and the Brecon Beacons National Park Authority (BBNPA) bisects the planning application site. For this reason, EHL's planning application has been submitted to both planning authorities. A map illustrating the division of the site into the two authorities is provided at figure 3.2.



3.5 Water storage, transfer and treatment facilities are a notable feature of the locality. Immediately to the north of the planning application site is the Penderyn reservoir, a lake formed by high artificial embankments. The reservoir is used for fishing by the Mountain Ash Fly Fishing Association (MAFFA). In addition to the reservoir there are operational pumping station and treatment facilities at the northern end of Ninth Avenue and on both sides of Fifth Avenue to the south-west of the application site.

3.6 The boundaries of the planning application site are clearly defined on the ground, comprising Fifth Avenue to the south, Ninth Avenue to the east, a woodland screen below the reservoir embankment to the north, and wooded hedgerows on the western side. A stream on the western side of the site flows into the River Camnant nearby. Photographs of the site as existing are provided at figure 3.3.

THE SITE

3.7 The planning application site is roughly square in shape and approximately seven hectares in area. In general the land comprises flat grassland with scrub vegetation. The site is classified as previously developed land, and ground investigations have identified made-up ground overlying the natural geology. The site has a well-defined network of drainage ditches in a regular herringbone pattern. It is understood that the site was levelled prepared for development by the former Welsh Development Agency approximately a decade ago. During the Second World War the site was used in association with a factory that made brass shell and bullet cases for munitions.



Chapter Four

SETTING THE DESIGN OBJECTIVES

STRUCTURE

4.1 As explained in the introduction, the Enviroparks proposal is intended to be an exemplar of sustainability not solely in terms of its overall function as a resource recovery and energy production park, but in its design and construction. Correspondingly, the proposals have evolved in line with the six *Key Principles of Sustainable Design* set out in *Guidance for Sustainable Design in the National Parks of Wales* (2008). For the purposes of clarity these six headings form the structure of this chapter:

- energy
- materials and resources
- water use
- landscape and biodiversity
- place and local distinctiveness
- robust building

ENERGY

4.2 The Enviroparks concept is to treat diverse streams of waste materials as a resource and to recycle material and recover energy in the most efficient and controlled manner. Consequently, the success of the scheme is dictated in part by the energy efficiency it achieves, and industry-leading technologies in energy recovery are thus a significant feature of the proposals.

4.3 Inherent to the selection of the site and the design of the scheme has been the concept of trading electricity and heat produced during the resource recovery process back to a high energy-use business on the park. This approach of co-location enables optimal efficiencies. Surplus electricity would be exported to the local electricity distribution network as a renewable source of energy.

4.4 The scheme has also been designed to meet the BREEAM 'excellent' standard so that its own energy footprint is further reduced.

MATERIALS AND RESOURCES

4.5 Development of the site will be seen in the context both of the existing industrial estate and the surrounding landscape, and consequently the proposed selection of materials takes account of the broader natural setting whilst also being an honest and functional proposal, recognising the scheme's purpose and the fact that the site is within an industrial estate and allocated for employment/industrial uses.



4.6 A further design objectives is to utilise a colour palette derived from this setting and which takes account of seasonality, weathering and contrast with its built and natural surroundings.

WATER USE

4.7 The site currently has a well-defined network of drainage ditches in a regular herringbone pattern, although it is located over boulder clay, which is a material of low permeability. Historical and recent evidence suggests that areas of the site can become saturated, and consequently the function and role of the existing drainage ditches will need not only to be replicated, but improved upon, in development proposals.

4.8 Chapter eleven of the ES provides a detailed assessment of the impacts of the scheme in terms of drainage and flood risk and elements of the scheme relating to the water environment are considered in Chapter five below.

LANDSCAPE AND BIODIVERSITY

Biodiversity

4.9 Avoiding harm to biodiversity, and contributing beneficially toward it, are key design objectives for the site given its proximity to national and internationally-designated sites. As set out in full at chapter thirteen of the Environmental Statement, the nature, scale and location of the scheme has required a very broad ecological assessment to be carried out. This has included:

- A desk study and an Extended Phase 1 Habitat Survey combined with an assessment of the potential for legally protected species and species;
- Evaluation of any previous ecological survey work;
- Evaluation of the site in terms of its nature conservation value.

4.10 A key finding of the above studies has been that the site itself is of low nature conservation interest, and that development of the site brings opportunities for positively enhancing biodiversity. Consequently, the introduction of a broad range of native species is a key objective.

Landscape

4.11 Given that the site lies partially within the protected landscape of the Brecon Beacons National Park, it is recognised that the visual effects of the scheme are an important consideration. Any scheme on the site should therefore seek to enhance the quality of the landscape, having regard to the extent of the zone of visual influence (ZVI).



4.12 A visual appraisal of the planning application site found that the ZVI is generally limited, with immediate views into the site restricted by surrounding vegetation, topography and buildings. More distant views of the site are also often partially screened by intervening vegetation and feature the site as a small part of a much larger panorama. Whilst these distant views are from rural areas, the site itself is seen within the context a developed valley floor, including the town of Hirwaun and its associated industrial estates, the settlement of Rhigos to the west and collieries and opencast workings such as Tower Colliery.

4.13 It is therefore a key objective that design measures reduce visual and landscape impact, including:

- a). minimising the scale of buildings and structures as far as is conducive to its effective operation of the scheme;
- b). using appropriate materials and a sensitive colour palette;
- c). providing screening and softening elements in proposals, particularly on the perimeter of the site.

Such design elements used in the EHL scheme are considered in Chapter five below, and Chapter twelve of the ES assesses the visual impact of the scheme in more detail.

PLACE AND LOCAL DISTINCTIVENESS

4.14 Development proposals should be responsive to context and local distinctiveness. This presents something of a difficulty given that the Hirwaun Industrial Estate itself lacks design cues of high quality and distinctive character. Equally, cues from the wider rural landscape might not necessarily be readily echoed in functional industrial development proposals. Vernacular styles would be inappropriate for buildings of the type currently proposed.

4.15 These two factors would suggest that innovation should be a design objective. TAN12 promotes such an approach, and policy G7 of the Brecon Beacons NPA Local Plan (1996-2006) encourages modern and innovative design in certain circumstances.

ROBUST BUILDING

4.16 It is integral to sustainable building design that proposals are able to cope with climate change, which is not limited to temperature increases. In Wales it is anticipated that there will be a trend towards more extreme weather, with hotter, drier summers and warmer, wetter and windier winters.

4.17 Potential future needs should also be taken into account, with a flexibility of design that allows for uses of the site to evolve over time as circumstances and requirements change.





Chapter Five PRODUCING THE DESIGN SOLUTION

STRUCTURE

5.1 This structure of this chapter follows the format provided at paragraph 3.12 of the guidance document '*Design and Access Statements in Wales: Why, What and How*' (Design Commission for Wales, 2008), which provides the following outline of aspects that should be considered:

'With particular reference to the updated TAN 12, the statement should clearly identify that the following aspects have been considered in detail through the design process:

Environmental Sustainability: *including landscape setting / habitat connections and biodiversity; energy and resource efficiency; and water and waste management;*

Access and Movement in and to the Development: *choice of site location; inclusive design; transport integration; and connectivity;*

Appearance and Character: *scale of development; density and mix of development; layout of development; architectural design; external spaces; adjacent uses.*

Public Safety: *crime prevention.*

5.2 This design and access statement has followed the template set in these best practice standards. The *Access and Movement* section is intended to meet the requirement for an integrated access statement as required by Welsh Assembly Government guidance⁶. In line with paragraph 4.2 of this guidance, this design and access statement has not addressed transport access to the site: this aspect of the application is addressed in chapter 8 of the Environmental Statement.

ENVIRONMENTAL SUSTAINABILITY

Landscape setting

5.3 It is proposed that there will be extensive planting and landscape works on the site boundaries. This will act as a natural buffer to the site, softening the angular lines of the built form. Significant planting will be also provided within the site, including along the boundary between the energy and waste sector of the site to the south-east, and the high-energy user facility to the north west.

⁶<http://wales.gov.uk/docrepos/40371/403823112/40382/40382/developmentcontrol/inclusivedesignfinal?lang=en>



5.4 An extensive landscape treatment is proposed along the frontage of Fifth Avenue, incorporating native planting and water features. This will further soften the key public-facing boundary of the site in an attractive manner. The visitor centre is proposed to be set within extensive landscaping at the south-eastern corner of the site in order to provide an attractive focal point in a prominent position.

Habitat connections

5.5 Ecological studies supporting this application (described in detail at Chapter thirteen of the *Environmental Statement*) have found that the Special Areas of Conservation (SACs), Sites of Special Scientific Interest (SSSIs), and Ancient Woodland in the wider locality do not appear to have any habitat connection to the application site. Nevertheless, measures promoting habitat and species connectivity have been taken into account in the development proposals, including the following.

- Landscape areas within the site will be designed to enhance existing and adjacent habitats.
- Appropriate zones of habitat transition or 'ecotones' will be established in the landscaped areas around the edges of the site. This would provide a natural gradation from intensely-managed amenity habitat to more natural habitats.
- Appropriate native species (or cultivars in the more amenity areas) and species of local provenance are proposed.
- The proposed development will have a landscape buffer strip along boundaries which will potentially provide foraging opportunities for bats.

Biodiversity

5.6 Ecological studies supporting this application (see chapter thirteen of the *Environmental Statement*) have assessed the effects of EHL's proposals on habitats. As a consequence, various measures have been taken which seek to protect, promote or introduce native species wherever possible. Overall, these will have the potential of enhancing the biodiversity value of the area. Measures include the following.

- Approximately 0.3 ha of grassland habitats will be created, which will accommodate native species.
- Existing habitats areas along the northern and western boundaries (totalling approximately 0.9 ha) will be retained and enhanced.
- Landscaped areas will provide approximately 0.7 ha of woodland and scrub planting,
- An area of 0.17 ha of open water and associated reedbed/marginal aquatic vegetation will be created within the southern landscape area.
- The inclusion of a sedum green roof on the visitor centre will provide additional habitats within the site. Sedum green roofs provide habitat for a range of invertebrate species.



5.7 The overall intention of these measures is twofold: to provide attractive screening, and to enhance the biodiversity of a relatively sterile site.

Energy and resource efficiency

5.8 The Envioparks concept is intended to be inherently sustainable, recovering as much energy and material resources as practicable from the waste stream. In addition, the clustering of resource recovery technologies on a single site reduces the need for partly-processed or unrecycled materials to be transferred between sites by road.

5.9 The development is to be situated on a recovered brownfield site that is allocated for industrial development, and this is energy and resource efficient in terms of promoting settlement patterns that minimise land-take and urban sprawl. The buildings have also been designed to meet the BREEAM 'excellent' standard so that its own energy footprint is reduced.

5.10 Rainwater will be collected for use in the resource recovery and energy production process, and this represents a renewable resource, minimising the requirement for mains-sourced water.

Water and waste management

5.11 The EHL scheme presents a comprehensive approach for sustainably managing water and waste. Mitigation measures proposed for the development, in order to control the potential impacts on water quality and quantity, include the following:

- process waters will be recirculated where possible, and surface water runoff will be collected and used;
- adequate storage for surface water run off will be provided, with the provision of tanks for clean roof run-off and a SUDS system with holding pond for other waters;
- abatement techniques such as interceptors and reed beds will ensure that potentially dirty run-off water is cleaned prior to entering the holding pond;
- high-performance effluent treatment systems will be provided to enable the site to re-use water where possible, or to discharge within any potential consent;
- comprehensive impermeable hardstanding will be provided in operational areas, whilst landscaping in non-operational areas will be retained.
- where possible, grey water from the reed beds will be re-used for flushing toilets.

5.12 Envioparks will also implement a comprehensive system of management and maintenance procedures, in order to ensure that mitigation measures implemented remain effective and efficient. Further detail of the above proposed measures, and the impact of them, are assessed within Chapter eleven of the *Environmental Statement*.

Summary

5.13 In view of the above measures, it is concluded that the proposals conform with relevant development plan design policy in terms of environmental sustainability, in particular policies ENV1: *development control criteria* and ENV3: *sites close to the national park* of the Rhondda Cynon Taff (Cynon Valley) Local Plan 1991-2006 as well as policy G2 of the Brecon Beacons UDP.



ACCESS AND MOVEMENT

Inclusive design

5.14 EHL's proposals have been designed in order to provide a fully inclusive and accessible environment, in accordance with BS 8300:2001 and Building Regulations approved Document Part M (2004)⁷.

5.15 New vehicular and pedestrian/cycle routes will be introduced, and these will integrate with existing infrastructure in Hirwaun Industrial Estate. All new pedestrian routes will be 1.8m wide in order to facilitate the passing of wheelchairs, and these will provide unobstructed level access. Wherever possible, the gradient of external areas and pedestrian areas will not exceed a gradient of 1:21, in order to reduce the need for ramped access. A ramped access will, however, be required at the gatehouse due to its elevated nature. The primary entrance to each building will be prominent and have a visual relationship with its surroundings.

5.16 All paving will be slip-resistant and reasonably smooth, and tactile paving will be used at crossing points in order to highlight dropped kerbs, and to warn of hazards generally. Disabled parking for the development will be provided in compliance with BS 8300:2001 at a minimum of 2% of the overall parking capacity, and this will cater for both employees and visitors. There will be a 1200 mm zone between all disabled parking spaces and roadways within the site.

5.17 Disabled parking is to be provided close to entrances with a level approach no steeper than a ratio of 1:21. All external entrance doors are to be provided with flush thresholds and clear openings in excess of 850mm. The fenestration and ironmongery will be fully compliant with the current Building Regulations Approved Document Part M (2004). Entrance doors will be fitted with powered openers.

5.18 Internally, all entrance lobbies will be provided of a size sufficient for a wheelchair user to turn in. Entrance lobbies will be provided with ambulant disabled stairs, with lifts or platform lifts where required. Stairs will have handrails and colour-contrasting treads and risers.

5.19 Disabled toilet facilities will be accessible from lobby areas and provided in accordance with BS 8300:2001. All internal doors will contrast visually other wall and floor surfaces, and doors will have a 300mm leading edge where required. Manually-opening doors will have an opening force not in excess of 20 Newtons at the leading edge. All ironmongery to internal doors will be visually contrasting. Vision panels will be fitted to internal doors on circulation routes in compliance with Building Regulations Approved Document Part M (2004).

Transport integration and connectivity

5.20 The proposed location of the Enviroparks development should reduce reliance on the private motor vehicle, because the site is accessible from local communities by bus and bicycle. Regular bus service 7/8/9 serves Hirwaun Industrial Estate during commuting hours,

⁷ http://www.planningportal.gov.uk/uploads/br/BR_PDF_ADM_2004.pdf



and this provides links to many of the settlements where the workforce for the facility might live, including Hirwaun, Aberdare, Penywaun, Glynneath and Rhigos. The site is also adjacent to a proposed route of the National Cycle Network, promoted by *Sustrans*. Safe pedestrian access from the rest of Hirwaun Industrial Estate is available. The development would incorporate covered bicycle parking and showering / changing facilities for employees who cycle to work.

5.21 Being an allocated site within an established industrial area, the application site enjoys good road access, capable of safely accommodating the transport needs created by the proposed development. As explained in the transport chapter of the Environmental Statement, the site has an appropriate standard of highway access for the uses proposed.

5.22 By bringing together a series of resource recovery processes on to a single accessible site, EHL's proposals seek to minimise the need to convey recycled materials between remote locations. The application site lies close to the envisaged catchments from which most waste would be sourced. The proposals would also divert a considerable amount of waste-related traffic away from relatively minor roads such as those serving the Bryn Pica landfill site, to which most local waste is currently transported.

Summary

5.23 In view of the above measures it is considered that the proposals comply with all relevant design policy on access and movement, including policy ENV1: *development control criteria* and ENV18: *access for all* of the Rhondda Cynon Taff (Cynon Valley) Local Plan 1991-2006 as well as policy G2 of the Brecon Beacons UDP.

APPEARANCE AND CHARACTER

Layout of the development

5.24 Siting and layout are essential considerations in any development, affecting whether proposals can be integrated into their surroundings, contributing to and enhancing the local sense of place. The scheme is intended to integrate into Hirwaun Industrial Estate and its existing infrastructure, reflecting the building lines of adjacent development.

5.25 The Enviroparks site will be split into two areas: the waste-to-energy site, which will include all parts of the process, and the high energy user site, which will accommodate conventional use class B1 or B2 industrial uses. Each of these two areas is proposed to have a separate entrance and a shared exit. It is intended that the sites are separated with fencing set into a landscape buffer between the sites. This is designed to ensure security whilst softening the centre of the site visually.

5.26 The site is situated adjacent to Fifth and Ninth Avenues, and the visitor centre is located beside the intersection of these roads in order to provide a point of visual interest on the main approach to the site. This interest would be further enhanced by an attractive scheme of landscape and planting along the frontage of Fifth Avenue, incorporating native planting and water features.



5.27 The main entrance to the site would be situated adjacent to the visitor centre off Ninth Avenue. When entering the site, car users (staff and visitors) would be directed to the landscaped parking area opposite the entrance. Works vehicles would use the separate main service route through the site, which would be a one-way system. This layout ensures safety, security and convenience.

5.28 The proposed buildings are situated around the service route in an order reflecting the various requirements of the resource recovery processes. The fuel preparation and Biomax areas are the two buildings would thus stand adjacent to the site entrance, behind the gatehouse. These will receive deliveries of feedstocks for the waste-to-energy processes.

5.29 The process units have been positioned so that wherever possible they are inward-facing. In being so arranged, this provides a visual buffer from the daily working activities, as well as an acoustic buffer to the areas adjacent the site. This arrangement furthermore enhances natural surveillance and improves site security.

Scale of development

5.30 The scale and height of the buildings in the scheme are intended to maintain similar proportions to existing buildings on the Hirwaun Industrial Estate, in order that the massing of the proposed Enviroparks development is coherent with its neighbours, including the Eden Industries complex immediately to the east.

5.31 The variety of building sizes in the proposal would provide visual interest within the site and articulate its use. The spacing of the units would provide visual breaks, to create interest and break down the massing of the larger built units. This would also avoid the appearance of large monolithic elevations, maintaining a personal scale.

Density and mix of development

5.32 The density of the site is high, both in order to make best and most efficient use of the land and to co-locate as many resource recovery processes as possible. Furthermore a fairly dense arrangement of buildings and processes in the resource recovery element of the scheme allows the area within the north-western part of the site, reserved for a high-energy user, to be as large as possible. This provides additional flexibility for that user.

5.33 The mixture of development has been determined by the Enviroparks concept, which encompasses a broad range of resource recovery and energy production processes within a single site. The inclusion of a visitor centre is integral to the concept, seeking to promote education in the field of sustainability, energy and the environment.

Architectural design

5.34 The proposed development seeks to establish a scale and massing that responds to the topography and buildings in the locality, whilst connecting the proposals to its immediate surroundings in a manner that will create a sense of place.

5.35 The design of the elevations has been considered carefully throughout the evolution of the project as a whole, with four main objectives:



- i). to ensure that the development is a coherent extension of the existing industrial estate;
- ii). to create the sense of a 'family' of buildings, creating an identity for the site;
- iii). to be sympathetic to its surroundings;
- iv). to create a quality environment with a sense of good design.

5.36 In order to unify the development and provide a sense of a family of buildings and materials, colours will be selected from a uniform palette. The following materials have been sympathetically selected in order to suit the modern industrial function of the scheme whilst reflecting the site's position in relation to the Brecon Beacons National Park:

- cedar boarding (external walls)
- metal cladding, both smooth and profiled (external walls)
- metal standing seam roof
- green roof sedum (visitor centre)

5.37 The use of these selected materials will vary slightly on each building, however the unified palette is intended to tie the development together, reflecting the natural earthy tones of the surrounding area and complementing the proposed cedar boarding.

- Roofs: Seal (RAL 040 50 05)
- External walls (metal cladding) Heather (RAL 040 70 05)
Fox Brown (RAL 040 50 02)

5.38 The variation of complementary materials is intended to create visual interest by providing contrast in terms of colour and texture. The fenestration of the larger buildings – in panels of contrasting colour and texture – would reduce the apparent massing of the larger buildings on the site. It is proposed that all buildings except the visitor centre would have a metal standing seam roof and a mid-to-dark tone grey finish in order to provide grounding to the elevations.

5.39 The proposed buildings would also share common detailing, including a high-level band of cedar boarding running in a band around the elevations below the eaves. The corners of each building would typically be framed with cedar boarding, although in some cases these would be substituted by glazing panels. The intention is for the cedar boarding to frame the elevations, providing a contrast to the panels of metal cladding that will alternate in colour and texture. This will help to reduce the massing of the larger buildings to a more human scale, and it will also provide visual and textual contrast and interest. These measures would also help to break up the appearance of the larger buildings in distant views.

5.40 Proposed variations in colour and materials would be used to accentuate entrances and the junctions between buildings. This will enhance the sense of a family of buildings and promote overall design legibility. The use of a variety of differently-shaped elements and materials on the elevations will also help to reduce the horizontal emphasis of the larger buildings.



5.41 In all cases, the front elevations include a main entrance, where the visitor would be presented with a glazed entrance with a canopy extending over it that would be set either into full-height glazing or into a contrasting panel of visual prominence, making the entrances clearly legible.

5.42 Windows would be used to articulate office and administration areas within each building and provide appropriate levels of daylight. All loading doors will have clear numeral signage to identify them and to ensure clear legibility.

External spaces

5.43 The proposed visitor centre would be set amongst extensive landscaped area at the south-eastern corner of the site, in order to provide a prominent and attractive focal point, adding legibility to the site entrance. It is intended that the immediate area outside the visitors centre would be used as amenity space, with outdoor seating for visitors and staff to enjoy.

5.44 A landscaped car park is proposed for staff and visitors, with a separate access route to the secure site for works vehicles, screened behind landscape features. The disposition of the open spaces within the secured area of the site beyond the gatehouse have been determined primarily by the needs of the resource recovery processes, which will have an occasional requirement for large machinery to be moved for repair or replacement. Where possible, landscape features and planting are proposed in order to soften routes through the site and provide visual interest.

5.45 The external area which houses the plant for the plasma process would be screened by adjacent buildings and through the use of a vegetated green wall. The height of the proposed green wall varies slightly so that it would provide visual interest and blend into the background with a more natural outline. The maximum height of the green wall will be equal to the height of the adjacent building. The base of the green wall will also have a 2.1 metre-high stone gabion wall for security. The green wall would also be used to screen the anaerobic digestion tanks, which would be set within a 2.5 metre deep bund in order to reduce their height and visual prominence.

5.46 External lighting in the scheme site has had particular regard to the landscape setting. The design, angle, positioning and intensity are designed to reduce off-site light pollution. There is generally a 60lux level beneath lights, falling to 10lux on internal roads.

Adjacent uses

5.47 The scale and height of the proposed buildings are intended to maintain similar proportions to existing buildings in the Hirwaun Industrial Estate, to promote a wider sense of physical consistency and visual coherence. This is principally relevant to the existing industrial buildings operated by Eden Industries across Ninth Avenue to the east of the application site.

5.45 Existing habitat areas along the northern and western boundaries would be retained and enhanced, and a comprehensive planting and landscaping scheme to the southern boundary of the site is proposed to present an attractive frontage to passers-by on Fifth Avenue.



Public safety and security

5.46 A range of design measures are proposed in the scheme to address issues of public safety and security, over and above the statutory requirements in terms of public health and other matters the subject of regulatory regimes other than the planning system. These enable the scheme to meet the requirements of policy ENV5 of the Rhondda Cynon Taff (Cynon Valley) Local Plan 1991-2006.

- Doors and windows are located in areas where they can provide natural surveillance within the site for security and safety reasons.
- The two major sectors of the site - the waste-to-energy area, and the high-energy user - are separated with fencing set into a landscaped buffer between the sites to ensure security.
- The base of the 'green wall' will have a 2.1 metre-high stone gabion wall for security.
- Various units are inward-facing in order to enhance natural surveillance and improve site security.

Summary

5.47 In view of the above measures it is considered that the proposals comply with all relevant design policy on appearance and character, particularly policy ENV1 of the Rhondda Cynon Taff (Cynon Valley) Local Plan 1991-2006 and policy G2 of the BBNPA Authority-Approved UDP.





Chapter Six **CONCLUSION**

SUMMARY

6.1 This design and access statement has explained in detail how EHL has employed high-quality and innovative site planning, architecture and landscape design to render the Enviroparks proposal a visually self-contained development, responsive to its setting whilst meeting operational requirements.

6.2 The overall conclusions of this design and access statement are as follows.

- i). A sensitive response has been taken within the setting of the Brecon Beacons National Park, through a combination of site planning, architecture, building materials specification, landscape and planting.
- ii). The design and layout of the proposals have sought to respond to, and improve upon, the environmental and setting of Hirwaun Industrial Estate. The proposals are designed to be less visually prominent and more integrated into the landscape than existing developments and structures in the locality.
- iii). The proposed development is intended to be innovative and modern, and characteristic of a high technology business or light industrial user. It aims to set new high standards of building design and sustainability.
- iv). Any impacts felt locally are, as a result of comprehensive mitigation, minimal and clearly outweighed by the overall benefits of the scheme.
- v). Full statutory requirements in terms of inclusive design accessibility have been met.
- vi). External signage and lighting are minimal and are designed in order to be visually harmonious in the surroundings.

6.3 In view of the above, therefore, the scheme is considered to meet all statutory and development plan requirements in terms of design and access.