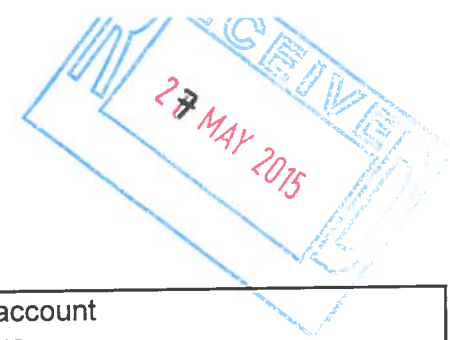


**Sustainability Checklist
Residential Development off Port Road, Wenvoe**

1500601 RES



Sustainable Measure		Tick box if you have taken this into account If Yes , what measures are proposed? If NO , or not applicable, state why not
Site Assessment (pages 9-10)		
Accessibility to neighbouring developments, local services and facilities	✓	<p>Development has its access off Port Road and will form a southerly extension to Wenvoe village. Existing public footpath links to adjoining Clos Llanfair and Rectory Close to be retained and enhanced. New footpaths will be created through the retained wooded areas providing green links from the site and Wenvoe to the surrounding farmland and rights of way network to the west and south.</p> <p>Development is within walking distance of a number of local facilities including St Mary's Church, convenience store and Gwenfo Primary School. The Vale of Glamorgan proposes to construct a cycleway on the west side of Port Road as part of a sustainable link between Barry to Cardiff. Bus stops are available in Port Road with services to Barry, Cardiff and Culverhouse Cross providing access to major retail and employment areas.</p>
Connections to existing pedestrian, cycle, rights of way and public transport routes	✓	
Existing infrastructure and its capacity	✓	<p>Infrastructure Assessment Report undertaken to establish availability and capacity of existing service infrastructure and this was submitted as part of the Outline Planning application. Report established that all necessary services to serve the development were available either adjoining or within the close vicinity and can be provided without adverse impact on the character of the area or to the local community. Surface water flows from the development will not discharge into the existing public sewer system but will be via a new attenuation basin with flows controlled by a hydro brake to ensure flow rates do not exceed the previous greenfield peak run off rates</p>

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Topography and site orientation	✓	The site is located immediately to the south and west of the existing settlement. It adjoins existing residential development to the north and east with the eastern adjoining Port Road. The southern boundary lies adjacent to Style Garden Centre and the western boundary lies adjacent to open countryside, from which it is separated by existing mature woodland and hedgerows. The site comprises a number of gently sloping fields defined by hedgerows and accommodates a number of woodland areas which are to be retained. An existing brook runs along part of the eastern boundary which is to be enhanced as part of the development with new link planting.
Archaeological or historic interests	✓	An archaeological assessment was submitted as part of the Outline planning application which concluded that the site is considered to be of low potential to contain significant archaeological remains and does not require any further investigation.
Boundary features, such as hedges, stone walls and tree lines	✓	The site is well contained with existing woodland and hedgerows to boundaries which are to be retained and enhanced where appropriate.
Local building characteristics and important views	✓	Due to the contained nature of the site views in and out are limited and will not be adversely affected by the development.
Ecological impacts assessed	✓	Ecological Appraisal undertaken.
Landscape/amenity impacts including trees and green spaces	✓	Development enables long term retention and enhancement of existing hedgerows and woodlands and provides for new public open spaces to be created.
Site Layout (page 10)		
Orientation of buildings utilises the benefits solar gain	✓	High proportion of the dwellings are orientated to have a south/south west facing front or rear elevation to benefit from solar gain.

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Infrastructure layout accords to the transport user hierarchy	✓	Existing public rights of way retained. Additional footway network within the site including new woodland walks. Pedestrian links to local facilities, public transport and open spaces. Links to wider cycleway network on Port Road. Easy access to bus services with stops in Port Road. Private car parking within garages or on plot to avoid the over dominance of cars in the street scene. Traffic calming measures within new highway, with pedestrian and cycle facilities designed to be safe, easy and convenient to use.
Maintains or improves existing pedestrian and cycle network	✓	Existing public rights of way retained/ diverted though the development. Additional footway network within the site including new woodland walks providing links to external footways and footpaths. New pedestrian and cycleway facility on access road near junction with Port Road. Link to proposed Barry to Cardiff cycleway on Port Road.
Allow for easy and safe access to public open spaces?	✓	New footpath links to public open spaces have been designed to be safe, easy and attractive to use and new dwellings have been orientated where appropriate to provide natural surveillance.
Street lighting designed to reduce light pollution and other environmental impacts	✓	Street lighting to be designed in accordance with The Ecological Baseline Report, paragraph 4.10 as submitted with the Outline Planning application.
Transport and Movement (pages 10 - 11)		
Safe movement for children, pedestrians and disabled persons	✓	Layout carefully designed to provide routes that are direct, logical and easy to navigate. The road layout incorporates traffic calming measures with surface and texture changes designed to discourage vehicle speed. Dwellings have been carefully designed and orientated to provide natural surveillance of the play area, footpaths and public areas. Boundaries are clearly defined allowing clear distinction between public and private space to promote a sense of ownership and responsibility.
Provisions made for cyclists e.g. secure cycle storage	✓	Cycle parking within the development will be provided for all dwellings. Properties with garages have additional space within the garage to store bicycles, and for properties without garages secure cycle parking will be provided with the provision of a garden shed or lockable stand.

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Encourages public transport use	✓	Development close to bus stops in Port Road- use of public transport to be promoted through the Travel Plan.
Maintain the transport user hierarchy	✓	Safe, easy, convenient and attractive pedestrian and cycle links within the development and wider community. Sustainable modes of transport to be promoted through the Travel Plan.
Sustainable Energy Use (pages 11 - 13)		
Undertake an Eco-Homes, BREAM, or NHER standards assessment to determine the overall environmental performance of the proposal	✓	SAP Energy ratings to be undertaken to meet the requirements of Part L1A Building Regulations 2010, and as a minimum all houses will have an 8% improvement to comply with Planning Policy Wales. Development designed to achieve Code for Sustainable Homes Level 3.
An EcoHomes Assessment is required for affordable housing funded through Social Housing Grant	x	EcoHomes Scheme now expired
BREEAM Assessment is required for WAG procured buildings	x	Not applicable to this development
Passive solar design	✓	High proportion of the dwellings are orientated to have a south/south west facing front or rear elevation to benefit from solar gain.
Natural daylighting	✓	All plots will receive the % daylight factor to be fully compliant with the requirements of the Code for Sustainable Homes.
Natural ventilation	✓	Windows to dwellings to be fitted with trickle vents.
Reduce energy consumption e.g. installation of A rated appliances, condensing boilers etc	✓	To promote energy reduction within dwellings display energy consumption data devices such as the Ecometer P370 smart meter is to be installed as standard. All gas boilers to be condensing A rated and have NOx emissions below 40mg/kWh. EU Energy Efficiency Labelling Scheme Leaflets to be provided to all new dwellings.
Provision of internal drying space or external communal drying area	✓	Rotary dryers to be provided in rear gardens to all dwellings.
Renewable Energy Sources (page 13 - 15)		
Solar Photovoltaic's (PV's)	x	Fabric first approach proposed to reduce carbon emissions.
Solar Water Heating	x	Fabric first approach proposed to reduce carbon emissions.
Small scale wind	x	Not considered appropriate/suitable for this development.
Biomass	x	Not considered appropriate/suitable for this development.

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Combined Heat and Power (CHP)	x	Not considered appropriate/suitable for this development.
Geo thermal	x	Not considered appropriate/suitable for this development.
Energy Efficiency and Material Choice (page 15)		
Use reclaimed or recycled materials	x	Not considered appropriate/suitable for this development.
Materials sourced from sustainable resources e.g. FSC certified timber	✓	Proposals seek to agree materials during the process of the application. New materials and construction techniques will be selected to ensure the lowest ecological impact over their protected lifetime. Timber will be from sustainable sources from well managed and licensed European sources. Insulation materials will be CFC free and have a GWP of less than 5 to help reduce ozone depletion. All of Redrow's suppliers have the appropriate EMS certification.
Use natural energy efficient materials e.g. timber, stone etc	✓	All materials specification are rated A+ to D within the Green Guide
Sustainable construction techniques e.g. straw bale, green roofing etc	x	Not considered appropriate/suitable for this development.
Street Lighting (page 15)		
Low energy street and other external lighting	x	Street lighting to be designed, however, specification for external lighting to individual dwellings is low energy with daylight sensor as standard.
Water Conservation (pages 15 - 16)		
Installation of dual water supplies e.g. rainwater run-off for toilets and/or grey water reuse	x	Not considered appropriate/suitable for this development.
Installation of low/dual flush toilets	✓	Dual flush WC's to be provided with a maximum 6 litre flush and lower 3 litre flush. Specification for fixture and fittings designed to achieve an internal water use of less than or equal to 105 litres per person per day.
Installation of rain water collectors for landscape maintenance and/or domestic garden use	✓	Rainwater butts to be connected to rear rainwater collection system.
Installation of water efficient A rated white goods	✓	All white goods where provided will be A rated which will aid in the achievement of an Internal water use of less than or equal to 105 litres per person per day.

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Use natural techniques, such as a reed bed filtration system to treat waste water	x	Not considered appropriate/suitable for this development.
Sustainable Drainage (pages 17 - 18)		
Installation of Sustainable Urban Drainage	✓	Surface water drainage/SuD's designed in accordance with Technical Advice Note (TAN 15)- Attenuation basin proposed
Soakaways	x	Not feasible- soakaway test results were either low or zero due to low permeability
Permeable surfacing	x	Not considered appropriate/suitable for this development.
Swales and Basins	✓	Attenuation basin to be provided on site.
Infiltration Trenches and Filter Drains	✓	Attenuation basin to be lined with an impermeable membrane to prevent infiltration from surrounding area.
Pond and Wetlands	✓	Attenuation basin to be provided on site.
Onsite Stormwater Detention	✓	Attenuation pond to provide onsite surface water storage with flow rates controlled via Hydrobrake system.
Green Roofs	x	Not considered appropriate/suitable for this development.
Waste Management (pages 18 - 19)		
Internal recycling/separation facilities	✓	Dedicated internal storage for recyclable household waste to be provided to each dwelling to encourage domestic recycling rates.
Communal external recycling/separation facilities	✓	Local Authority waste collection scheme Access and space to be provided as per Code for Sustainable Homes requirements for the storage of external waste- bins to be provided by LA. Containers to be provided in gardens for individual home composting.
Re-use/recycle existing building materials	x	Not applicable to this development
Implementation of an on site waste management scheme during construction	✓	Compliant Site Waste Management Plan to be produced that contains target benchmarks for resource efficiency, procedures for minimising construction waste, together with procedures and commitments to sort and divert waste from landfill in line with Checklist WAS 2a,b and c of the code for Sustainable Homes. Redrow have a group SWMP deal with Reconomy and diverted 90% of waste from landfill last year.
Landscape, Trees and Ecology (pages 19 - 21)		

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EIA of other ecological assessment/surveys conducted	✓	EIA not required as determined via screening process. Ecological Appraisal undertaken and submitted with Outline application.
Retention of existing trees as part of the site layout/landscaping scheme	✓	Existing hedgerows and woodlands to be retained.
Incorporation of ecological mitigation or compensation measures	✓	As per recommendations of the Ecological Appraisal
Creation of new wildlife habitats	✓	Ecological management proposals, retention and enhancement of the existing hedgerows, woodland and brook together with the new POS areas and link planting will provide opportunities to increase biodiversity
Inclusion of post-development management, monitoring and review	✓	Public open space areas to be adopted by Local Authority or maintained by Management Company.
Retention/enhancement of existing landscaping features	✓	Existing hedgerows, woodlands and brook to be enhanced with new native link planting, development carefully designed to ensure long term retention.
Plant locally sourced indigenous trees and plants	✓	To be incorporated into proposed landscaping scheme
Minimise the opportunities of crime	✓	Development to be compliant with 'Secured by Design- New Homes'
Mixed use development proposed	✗	Not considered appropriate/suitable for this development.