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Planning Design Economics

Barry Waterfront

**Environmental Statement
Chapter C**

**Site Description &
Proposals**

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1.0 Introduction

- 1.1 This chapter of the Environmental Statement provides a detailed description of the site and the development proposals including an assessment of access, infrastructure, construction and phasing. It also considers the need for the development and the alternatives considered.

The Surrounding Area and Context

- 1.2 The existing Waterfront development comprises some 690 residential units together with a retail area incorporating a retail food store and non-food retail units as well as a medical centre. To the west of the Gladstone Bridge is the Innovation Quarter which comprises a range of office and business starter units.
- 1.3 Two important listed buildings and local landmarks lie to the northern part of the site: the Dock Office to the east and the Hydraulic Pumphouse to the west.
- 1.4 Protruding from the Barry Waterfront application site is The Mole. The Mole lies at the centre of the main development site not only physically but also in terms of its high visibility in the centre of Dock No 1.

Site Location and Description

- 1.5 The site incorporates land at Barry Waterfront, as shown in the Site Location Plan at Figure C1. The site is strategically positioned between the Town Centre, Barry Island and the harbour which encloses 30 hectares of water with 4.3 kilometres of quayside lining No 1 Dock. The railway between Cardiff and Barry Island borders the perimeter.
- 1.6 The site is divided into four distinct areas West Pond, South Quay, Arno Quay and East Quay.

West Pond

- 1.7 The West Pond is contained by railway lines to the north, west and south. Dock No. 1 forms the other boundary. Vehicular access to this part of the site is currently via Ffordd y Mileniwm Road to the north east. From the north-west, access is gained to the site from Barry Town via the Island Road leading to Hood Road which connects to the western-most roundabout of Ffordd y Mileniwm. Vehicular access into the south-east corner is from the southern Harbour Road which links into Paget Road.

South Quay

- 1.8 South Quay site is bounded by Dock no. 1 to the north and east, the cliff of Barry Island to the south and the West Pond site to the west. Vehicular access from the north is via the western roundabout of Ffordd y Mileniwm and then

Powell Duffryn Way running along the west edge of the dock. From Barry Island, Dock Road enters the site at the south east, linking to Charles Darwin Way, which runs along the dock edge and meets Powell Duffryn Way in the west.

East Quay

- 1.9 East Quay is separated from the rest of Waterfront Barry at the eastern end of Dock No 1 adjacent to the Council Dock Office.

Arno Quay

- 1.10 Arno Quay lies on the north side of Dock No.1 contained by the existing Barry Waterfront development. It is to the south of and 4-5m below the level of Ffordd y Mileniwm.

Characteristics

- 1.11 The Barry Waterfront application site has a significant industrial past as increasing demands of the coal export industry in the mid 19th Century led to the identification of Barry as a suitable site for docks and a railway. The industrial heritage of Barry Waterfront has left behind a number of physical features within the site, however, it has also led to elevated concentrations of contaminants in hotspots across the site that will be remediated as part of the development.
- 1.12 The East Quay area originally formed two graving docks and included a pump house. The southern graving dock still remains however the northern dock is now filled in and forms a flat area of land south of the Dock Office. The ground is slightly raised where the pump house was located.
- 1.13 Land at Arno Quay has been landscaped as a flat gravelled surface. This landform is the result of the remediation of the northern areas of Barry Docks during the 1990s which included earthworks, the removal of foundations and sub-surface structures from upper levels, the removal of contamination hotspots and the provision of a capping layer.
- 1.14 West Pond comprises a relatively flat grassed area with a number of rubble tips and a gravel path running through the centre. The remains of a derelict tank wash are located at the south-eastern edge of West Pond.
- 1.15 A number of extant buildings remain within the South Quay development area including the concrete bases of storage tanks, a tiled floor surface and a Research Vessels Services building. The area also contains a number of sunken concrete pits and pipe outlets and remnants of railway lines at the dock edge.

Topography

1.16 The topography of the site varies. The town centre slopes down to the Waterfront and then rises steeply along the southern boundary with Barry Island. The elevated position of the surrounding areas provides vistas of the dockland and northern slopes of Barry Island. The majority of the site itself is relatively flat, with localised areas of higher and lower land:

- The land within Arno Quay ranges from 7.0 metres to 8.5 metres AOD, although higher levels (c. 14.5 metres AOD) are experienced along Ffordd y Mileniwm to the north of Arno Quay.
- East Quay levels range from 6.4 metres to 11.0 metres AOD, however the majority of the site varies in level between 7.0 metres and 8.5 metres AOD. The higher land is situated along Ffordd y Mileniwm to the north of East Quay.
- Levels within South Quay vary between 8.0 metres and 8.5 metres AOD, although localised areas along the quay walls in the south west corner of the site are lower, varying between 7.7 metres and 8.0 metres AOD.
- West Pond levels vary between 8.0 metres and 8.75 metres AOD, although site levels rise to between 9.5 metres and 11.0 metres AOD in the western corner and in stockpiled mounds in the central area. Levels vary between 7.7 metres and 8.0 metres in the southwest corner and along the dock revetment in the east.

Access

1.17 Access to the site is currently afforded by all modes of surface transport. Cardiff International Airport is some 5.6 km to the north west, whilst the dock gates allow access to the Waterfront by boat from the sea.

Main Roads

1.18 In terms of road access, the A48 runs from Culverhouse Cross to Waterton Cross in Bridgend. Access to Barry is via the Port Road to the north and east and the Five Mile Lane to the north-west. The A4055 (Broad Street and Gladstone Road) connects with the Gladstone Road Bridge into the site. Ffordd y Mileniwm provides the main access from the east and runs through the northern part of the site serving the Waterfront. Clive Road runs to the southern edge of the site with Hood Road enabling access from the north west.

Railways

1.19 Rail links are available to the site, from Barry Docks, Barry Town and Barry Island stations, with the lines connecting to the national rail network. The presence of three railway stations in such close proximity to the site provides a significant opportunity in terms of promoting sustainable patterns of movement and adhering to the movement hierarchy.

Buses

- 1.20 Regular bus services pass adjacent to the site as part of the existing service provision on routes through the Town, to the Island and the surrounding areas.

Cycling

- 1.21 Sustrans national cycle routes pass through Barry, including along the north edge of No 1 Dock. Locally, the site is accessible from the Island, the Harbour area and the Town, with positive connections available at several key locations along its length.

Walking

- 1.22 Pedestrian access from the Town Centre to the Waterfront is via Holton Road, Gladstone Road Bridge and Subway Road. The Council is also bringing forward a new pedestrian bridge at Thompson Street linking the site with the town centre. Metal steps provide access from the cliff top of Barry Island from Clive Road down to the south of the site. Access from the south east is via Dock Road.

2.0 Description of the Development Proposals

2.1 This section sets out the description of the development in detail. It is crucial that the outline proposals are provided in sufficient detail in order to ensure they comply with the requirements of the Town and Country Planning (General Development Procedure) Order 1995 and the 1999 EIA Regulations (as amended). Failure to do so would prejudice the robustness of the Environmental Statement and subsequently the planning application.

2.2 Parameter plans have been prepared which establish the distribution and arrangement of the different land use elements of built form and minimum and maximum building envelope, floorspace and heights. These are appended to this chapter (Appendix C1) and provide a robust basis to test the environmental effects of the development - identifying any that are significant - and meet the requirements of the EIA Regulations. The parameter plans listed within Appendix C1 and should be referred to through this section include:

- Parameter Plan 1: Building Envelope and Proposed Uses
- Parameter Plan 2: Building Heights
- Parameter Plan 3: Movement
- Parameter Plan 4: Public Open Space

2.3 As the planning application is in outline the application is accompanied by an illustrative layout and landscaping details to demonstrate these relationships to provide sufficient information to allow a robust decision to be made regarding the proposals.

2.4 The Consortium of Persimmon Homes, Taylor Wimpey and BDW Trading Limited (Barratt South Wales) is applying to the Vale of Glamorgan Council for outline planning permission for the following:

Development of vacant land at Barry Waterfront for residential (C3), retail (A1), cafés, bars and restaurants (A3), hotel (C1) and, offices (B1). Development of vehicular and pedestrian/cycle access including a new link road, re-grading of site to form new site levels and associated infrastructure works, parking, servicing, landscaping, public realm and public open space provision.

2.5 The application site comprises a gross area of approximately 43 hectares (106 acres) which includes the following character areas:

- a District Centre
- b West Pond
- c South Quay Parkside & Waterside
- d Arno Quay
- e East Quay

2.6 The above areas include provision for recreation, ecology and public realm as well as highway infrastructure.

- 2.7 An illustrative masterplan is attached as Figure C2. The separate development character areas are set out in detail below and illustrated in Figure C3.
- 2.8 The parameters for this outline planning application establish maximum floorspaces for land uses across the site which are set out in Table C1 below. It should be noted however that a range of residential unit numbers and floorspace is provided within the character areas to allow for future flexibility but will be limited to a maximum of 2000 units. The maximum floorspaces have been tested within this ES to provide a worst case scenario in terms of environmental effects.

Summary of Maximum Floorspace	
Residential Use (C3)	Up to 2000 dwellings
Retail Use (A1)	6,525 sqm GEA food store / 2,300 sqm GEA non food retail
Cafes and Restaurants (A3)	Up to 1,820 sqm GEA
Offices (B1)	Up to 3,450 sqm GEA
Hotel (C1)	Up to 3,500 sqm GEA

Table C1 Summary of Maximum Floorspace

District Centre

- 2.9 The District Centre forms the mixed use 'heart' of the Barry Waterfront development, providing connections to existing commercial areas and maximising opportunities presented by its location in relation to the waterfront. It also provides an extension to the leisure focus of Barry Island.
- 2.10 An aim of the District Centre development is to create a vibrant and attractive destination as well as a hub for both new and existing communities.
- 2.11 Table C2 below summarises the key aspects of the development proposals in the District Centre.

District Centre	
Area	7.11Ha
Uses	<p>District Centre including:</p> <ul style="list-style-type: none"> • B1 Offices • C1 Hotel • A1 Retail • Car Parking for A1 and a Petrol Filling Station • A3 Café, Restaurant and Drinking Establishments • C3 Residential <p>In addition to the safeguarding of land for the future development of a school.</p>
Layout	A range of A3, office and residential uses fronting a quality waterside public realm. To the rear of the waterfront development is a supermarket and non food retail units with associated car parking and a petrol filling station. To the west of the main street land is safeguarded for education uses with a mixed office and residential buildings to the north.
Floorspace/Units (gross external)	<p>Offices: up to 3,450 sq m</p> <p>Hotel: up to 3,500 sq m</p> <p>Retail: up to 8,825 sq m</p> <p>Café, Restaurant and Drinking Establishments: up to 1,135 sq m</p> <p>Residential: 150 units (max)</p> <p>Petrol Filling Station: 72 sqm</p>
Max Height and Scale	<p>Non-Residential: Maximum 12 m (+/- 2m)</p> <p>Residential/Mixed Use: 5-7 storeys at key location; 3-5 storeys fronting the waterfront</p>
Phasing	<p>Remediation & Construction:</p> <p>Phase 1A</p>

Table C2 District Centre Development Summary

West Pond

- 2.12 West Pond will comprise terraced housing and open space and will be readily recognisable as an extension of Barry Town. The railway and causeway to the Island form the boundaries to the north, south and west of the West Pond character area whilst the new Main Street will define its eastern boundary.
- 2.13 Table C3 below summarises the key aspects of the development proposals at West Pond.

West Pond	
Area	7.58 Ha
Uses	Residential and open space
Layout	A 'gridded' street layout accessed from the primary distributor 'Main Street'.
Floorspace/Units	Density: 60-70 dph 500-700 dwellings: <ul style="list-style-type: none"> • 20-30% apartments • 20-30% 2-bed houses • 20-30% 3-bed houses • 10-20% 4-bed houses
Max Height and Scale	Predominantly 2 storey housing with three-storey elements at key junctures.
Phasing	Remediation: Phase 1A Construction: Phases 1A, 1B, 2 and 3

Table C3 West Pond Development Summary

South Quay Parkside & Waterside

- 2.14 This development character zone extends to 19.07ha extending along the southern boundary of the site.
- 2.15 The Waterside element will accommodate a district neighbourhood, with a hierarchy of streets creating a private residential area enclosed by the existing physical features of the No 1 Dock to the north and cliff face to the south. As well as providing residential development South Quay Waterside will also incorporate public realm improvements. The public realm will focus on the dock edge to create three residential sub-areas however public realm improvements will also be made along the southern edge of South Quay Waterside within a green buffer between the proposed residential development and the cliff.
- 2.16 South Quay Parkside is situated to the west of South Quay Waterfront, south of the District Centre. It is split into two primary components; the residential area and the linear park.
- 2.17 The Parkside residential area will create a distinct neighbourhood, with a hierarchy of streets creating private residential areas enclosed by the cliff and the new linear park. The linear park will provide a sense of place for residents and visitors and sub-divide the overall area into two smaller residential areas essentially north and south of the linear park. The Linear Park forms a landscaped open space corridor that connects the site to both its immediate and wider contexts.
- 2.18 Table C4 below summarises the key aspects of the development proposals at South Quay Parkside and Waterside.

South Quay Parkside & Waterside	
Area	19.07 Ha
Uses	Residential and Public Realm. Limited small scale commercial.
Layout	House and apartment types ranging from the largest three and four-bed houses along the waterfront to the smaller two, three and four-bed housing to the rear, interspersed with 1 and 2 bed apartments.
Floorspace/Units	Density: 75-85 dph 650-900 dwellings: <ul style="list-style-type: none"> • 20-30% apartments • 20-30% 2-bed houses • 20-30% 3-bed houses • 10-20% 4-bed houses A3 uses up to 555 sq m GEA
Max Height and Scale	3-4 storeys along waterfront and at key locations.
Phasing	Remediation: Phase 6 Construction: Phases 6, 7 and 8

Table C4 South Quay Parkside & Waterside Development Summary

Arno Quay

- 2.19 Arno Quay is located between the Waterfront 1 housing development to the west and Waterfront 1 apartment blocks to the east. Arno Quay offers a gateway opportunity to Barry Waterfront.
- 2.20 The Arno Quay residential area will have a built form derived from the topographic characteristics of the site and its relationship to the Waterfront to the south and Ffordd y Mileniwm to the north. The layout of the site will be influenced by the existing development grain of Waterfront 1 and will be served by a neighbourhood road running parallel to the dock edge.
- 2.21 Table C5 below summarises the key aspects of the development proposals at Arno Quay.

Arno Quay	
Area	1.43 Ha
Uses	Residential and public open space
Layout	Linear blocks with a defined building line that optimises the depth offered by the plot and maximises the opportunity for south-facing waterfront aspect. The layout follows the general grain of development within the Waterfront 1 development.
Floorspace/Units	Density: 125-200 dph 75-200 dwellings: <ul style="list-style-type: none"> • 50-100% apartments • 0-50% 3 bed houses • 0-40% 4-bed houses
Max Height and Scale	3-5 storeys maximum.
Access	Neighbourhood road running parallel to dock edge, linked to Ffordd y Mileniwm.
Phasing	Construction: Phase 2

Table C5 Arno Quay Development Summary

East Quay

- 2.22 East Quay occupies a significant area adjacent to the Local Authority's Dock Offices with strong visual connections to the main development site across Dock No. 1. East Quay is a peninsula residential development linked by Cory Way and the extended dockside promenade. It also incorporates a major public open space for use by the wider Barry community.
- 2.23 Table C6 below summarises the key aspects of the development proposals at East Quay.

East Quay	
Area	7.03 Ha
Uses	Residential and public open space with small scale food and drink uses.
Layout	Residential comprising primarily two and three-bedroom housing with a selection of one and two-bedroom apartments. Public open space will comprise a sports pitch, piazzas and public art. Green space will also be provided at East Quay Gardens and East Quay Meadow. Allowance for provision of commercial usage associated with future marina.
Floorspace/Units	Density: 60-80 dph 100-250 dwellings: <ul style="list-style-type: none"> • 20-30% apartments • 20-30% 2-bed houses • 20-30% 3-bed houses • 10-20% 4-bed houses A3 Uses: Up to 130 sq m GEA
Max Height and Scale	Maximum 3-storeys fronting the waterfront with 2-storey houses behind.
Phasing	Remediation & Construction: Phase 9

Table C6 East Quay Development Summary

Access

- 2.24 Parameters have been established for movement and these are set out in Parameter Plan 3 within Appendix C1.

Vehicular Access

- 2.25 There is a well established highway network surrounding the development sites however there is currently no highway infrastructure within the sites.
- 2.26 As part of the development a new link road is proposed continuing Ffordd y Mileniwm and completing a more direct link between Barry Town Centre and Barry Island.
- 2.27 In order to minimise the impact of the development on the highway network a number of junction improvement schemes have been identified and assessed within the Transport Assessment (Chapter D, Appendix D1).
- 2.28 In order to mitigate against vehicular impacts of the development it is proposed that 7 junctions will be remodelled by alterations to the existing junctions to allow for improved junction capacity and traffic control. A further four existing junctions will be replaced with either a signalised junction or a roundabout. The Local Authority has already programmed improvements to two existing junctions at Merrie Harrier and Waycock Cross. Further details are provided within Chapter D 'Mitigation Measures'.
- 2.29 Residential parking provision will be averaged across the site and will provide for the following:

- Apartments: 1 space per unit
- 2-bed houses: 1 space per unit
- 3-bed houses: 1.5 spaces per unit
- 4-bed houses: 2 spaces per unit

Public Transport

- 2.30 The proposed development will create pedestrian links within the site providing good links to Barry, Barry Dock and Barry Island rail stations. The potential for an improved footpath across the existing railway sidings situated south of the Powell Duffryn Way/Hood Road junction will be explored with the Council. This will allow more direct pedestrian access from the development areas to the Barry Town Rail Station via the Powell Duffryn Way underpass, and Broad Street.
- 2.31 It is considered desirable to divert the route of the Number 95 bus through the site to two way loop at Barry Island. This would provide a 15 minute frequency service through the site. In addition, it may be possible to divert other existing services through the site, increasing frequency further however discussions with bus operators are ongoing.

Pedestrians and Cyclists

- 2.32 The proposed Barry Waterfront development affords high priority to pedestrian permeability. The newly constructed link road will include wide footways and dedicated at-grade crossings will be provided at the proposed signalised junctions along the main link road.
- 2.33 A segregated cycle/footway is provided along the majority of the existing Ffordd y Mileniwm, running along the northern side of the road from the roundabout situated at the north eastern corner of the application site to the Ffordd y Mileniwm/Cardiff Road roundabout. This link forms part of the proposed National Cycle Network Route (NCN) Route 88. When fully completed, this route will link NCN Route 4 at Margam Park near Bridgend, through the Vale of Glamorgan to NCN Route 8 in Cardiff Bay.
- 2.34 The development proposals have designed the internal road network in a way that facilitates cycle use and affords cyclists a similar level of accessibility to pedestrians.
- 2.35 There is also a dedicated cycleway which will run along the western edge of the former No. 1 Dock to provide both commuter and leisure cyclists with an attractive alternative to the car, providing access to the dedicated cycleway along Ffordd y Mileniwm.
- 2.36 It is proposed that residential units will be constructed with dedicated secure cycle parking.

Ecology & Landscape Strategy

- 2.37 The site is not covered by, or located in close proximity to any feature designated for its nature conservation interest. The proposed development site comprises of a limited number of habitat types – principally grassland, scrub, colonising vegetation and bare ground – that have established over this Brownfield site in the period since it was last in general use as part of the Port of Barry. Parameters have been established for public open space and public realm which are presented in Parameter Plan 4 at Appendix C1.
- 2.38 Site clearance, remediation and increasing the level across the site make it inevitable that most existing ecological features within the development footprint will be lost. The proposed development therefore has considered protection of adjoining habitats/features, maximising the biodiversity of new planting/open space and the provision of on-site mitigation measures as key points in mitigating the effects of the scheme.
- 2.39 Key features of the proposed development are:
- Retention and protection of 2m wide strip at the cliff base and face along the South Quay;
 - Retention of 5300m² grassland areas for Skylark to the south of East Quay;
 - Design of Public Open Space in East Quay to provide grassland of potential value to Skylark (2200m²);
 - Possible retention of 7100m² of ABP land on East Quay to retain grassland habitat in-situ and provide potential resource to Skylark;
 - Provision of 1000m² wildflower meadow as part of public open space at East Quay;
 - Creation of linear park swale and meadow strip habitat through West Pond;
 - Up to 61,400m² of public space including grass, bulb, herbaceous, trees and shrub species selected to be beneficial to biodiversity;
 - Street tree network to contribute to foraging corridors for birds, bats;
 - Retention and protection of rare plant (Childing Pink) areas off site (East Quay) and translocation of species (Corky Fruited Water Dropwort);
 - Provision of brown roofs on the District Centre in West Pond (approximately 2600 m² of habitat).
 - Brownfield habitat to be provided – up to 2000m² - as part of green corridor around south-eastern periphery of site. This provision would be at ground level with 7m wide scrub/hedge border adjacent to the development. Substrate of crushed brick/concrete to be seeded with native grasses/wildflowers and maintained as a brownfield meadow.

- Translocation of reptiles from within the application boundary to a suitable offsite area (Cosmeston Country Park)
- Creation of 'green corridor' link between off-site railway scrub and the cliff corridor.
- Retention of the cliff top green space managed as wildlife gardens, allotments and open space.
- Up to 1:10 of the approximate 600 houses in South Quay to have bird boxes.
- Up to 600 m² of thicket scrub in East Quay Park.

Ground Strategy & Drainage

- 2.40 It has been found that the site has hydrocarbon contamination, which may pose a health risk during excavation works without mitigation. In order to overcome this and minimise risk the contamination will be controlled through implementing best practice and adhering to industry Regulations.
- 2.41 To provide flood protection across East Quay, West Pond and South Quay ground levels will need to be revised, typically by 0.5 metres – 1.0 metres. To allow movement within the site during a flood event, all new roads will also be raised above the 1 in 200 year extreme flood level of 8.868 metres AOD. This is in accordance with the requirements of TAN15. To ensure that the off-site access roads do not flood by more than 0.6 metres during an extreme event, local lengths of Y Rhodfa and Cory Way roads may need to be raised up by up to 0.2 metres and 0.4 metres locally to ensure emergency access during an extreme flood event.
- 2.42 Ground conditions across the site contain highly compressible Estuarine Alluvium that will consolidate when loaded. To pre-consolidate the alluvium surcharging is proposed across much of the site, which will require the importation of additional volumes of material. In total it is estimated that some 40,000 m³ of suitable material will need to be brought onto site to fill and surcharge. The majority of this material will need to be imported during the first few months and placed in the Phase 1 area. It is also proposed to move some 30,000m³ from the existing site for use as filling and surcharging onto the Phase 1 area. Once the surcharging is complete, much of this volume will be moved to subsequent phases of development.

Construction and Phasing Considerations

- 2.43 The overall construction period for the proposals is estimated to be approximately 10 years from 2010 to 2020. Details of the phasing of development are provided below and should be read in conjunction with the Phasing Programme and Illustrative Phasing Plan provided at Appendices C2 and C3 within this Environmental Statement.
- 2.44 The phasing and rate of development will be influenced by market conditions and is therefore likely to vary from the estimated programme.

Phase 1: West Pond (part), District Centre & South Quay Parkside (part)

2.45 This phase includes the construction of approximately 240 dwellings and the supermarket / non food retail units.

- Physical works commence in Sept 2010, with site clearance and remediation works.
- Surcharging is scheduled run from November 2010 until the end of July 2011; it is anticipated that approximately 40,000m³ of fill will be imported into the site for this purpose.
- Highways, services, drainage and off-site services work will be undertaken between April 2011 and the end of September 2011,
- House building will commence in August 2011 with first occupancy in January 2012.
- Occupation of the supermarket is anticipated from August 2011.
- It is anticipated that the new Link Road would be constructed and operational following the first phase of development.

Phase 2: District Centre (remainder), West Pond (part), Arno Quay

2.46 This phase includes approximately 300 dwellings, hotel, offices, A3 uses, public open space and public realm.

- Site clearance is proposed to take place in October 2011, with surcharging commencing in October 2011 and continuing until May 2012.
- Highways, services and drainage will be installed between July 2012 and October 2012
- House building is proposed to take place between June 2012 and October 2012. It is anticipated that residential units within Phase 2 of the development will be available for occupancy from November 2012.

Phase 3: West Pond (part)

2.47 Approximately 250 dwellings

- Site clearance within Phase 3 of the development is scheduled to take place in February 2013, with surcharging commencing in February 2013 and ending in September 2013.
- Highways, services and drainage will be installed between October 2013 and February 2014.
- It is anticipated that the residential units within Plots 8, 9, 10 and 12 of the West Pond site will be available for occupancy from March 2014.

Phase 4: South Quay Parkside (part)

2.48 Approximately 225 dwellings and public open space.

- Site clearance within Plots 1, 2, 3, 4 and 5 of the South Quay site is anticipated to take place in April 2014. Surcharging will be undertaken from April 2014 until November 2014.
- Highways, services and drainage works will be undertaken over the period November 2014 and April 2015.
- Housebuilding is anticipated to take place between December 2014 and April 2015 and it is expected that residential units within this development phase will be available for occupancy from May 2015.

Phase 5: South Quay Parkside (part)

2.49 Approximately 150 dwellings, public open space and public realm

- It is anticipated that site clearance will take place in May 2015 and surcharging will be undertaken over the period May 2015 to December 2015.
- Highways, services and drainage infrastructure works will be undertaken between December 2015 and May 2015.
- House building within this phase is anticipated to commence in January 2016 with occupations from June 2016 onwards.

Phase 6: South Quay Waterside (part)

2.50 Approximately 175 dwellings, public open space and public realm

- Site clearance is anticipated to take place in February 2015.
- Remediation within the Phase 6 plots and the Phase 7 plots is anticipated to take 12 months over the period February 2015 to January 2016.
- It is anticipated that services will be diverted within the South Quay site in February and March 2015.
- Following site preparation, surcharging will take place within this area of South Quay between February 2016 and September 2016.
- Highways, services, drainage and off-site services are expected to be installed between June 2016 and November 2016.
- House building taking place between October 2016 and February 2017 with first occupations from March 2017 onwards.

Phase 7: South Quay Waterside (part)

2.51 Approximately 150 dwellings and public realm

- Site clearance is scheduled to be undertaken in March 2017.
- Surcharging will take place for 8 months, over the period March 2017 to October 2017.
- Highways, services and drainage works will be undertaken between July 2017 and the end of October 2017.
- House building can then commence in August 2017, with occupation anticipated from January 2018 onwards.

Phase 8: South Quay Waterside (part)

2.52 Approximately 260 dwellings and public realm

- Site clearance is anticipated to take place for a month in December 2017.
- Surcharging is also anticipated to commence in December 2017 running over 8 months to July 2018.
- House building is expected to take place between May 2018 and September 2018, with occupation of the residential units available from October 2018 onwards.

Phase 9: East Quay

2.53 Approximately 250 dwellings, public realm and public open space.

- Site clearance within East Quay is anticipated to take place in September 2018.
- Remediation and service diversions will take two months between September 2018 and October 2018 and
- Surcharging requiring the import of 20,000m³ of fill, is anticipated to take place between November 2018 and June 2019.
- Highways, services, drainage and off site services will be installed between March 2018 and the end of August 2018.
- Housebuilding will take place between June 2018 and November 2018 and it is anticipated that the residential units will be available for occupation from December 2018 onwards.

3.0 Need and Alternatives

3.1 This section provides an overview of the need for the Barry Waterfront development and a summary of the alternatives which have been assessed.

Need for the Development

3.2 The site is located to the south of Barry town centre and represents one of the most significant development opportunities within the Vale of Glamorgan. It is considered that the regeneration of this derelict brownfield site is key to the continued regeneration of Barry and to the Vale meeting housing supply targets in line with national planning guidance.

3.3 The site is situated within a strategic and sustainable location as it is within close proximity of three train stations with excellent connections to Cardiff, there are a number of existing bus stops close to the site and the site is located adjacent to an existing highway network. As such the Barry Waterfront site has unique strategic locational benefits upon which a landmark sustainable mixed use development can be delivered.

3.4 Barry is the highest order settlement within the Council area with the widest range of services. The site is within easy walking distance of the town centre. It is therefore the most sustainable location for new development within the Vale of Glamorgan.

3.5 There are considerable barriers which face the successful regeneration of this brownfield site due to the fact that it is currently derelict, within a tidal flood risk area and parts of the site suffer from contamination. As such, extensive remediation works will need to be undertaken in order to make redevelopment feasible.

3.6 An overriding objective of both national and local planning policy includes prioritising the use of previously developed land in preference to greenfield sites. The Welsh Assembly Government also encourages the creation of sustainable residential environments and encourages local authorities to promote well designed, easily accessible mixed use developments which represent an efficient use of land. The application proposal sits at the heart of this agenda to make optimal use of previously developed land in a sustainable location. As such, the regeneration objective from national to local policy level underpins the application proposals.

3.7 The Barry Waterfront site is allocated within the Vale of Glamorgan UDP as a 'Comprehensive Development Area' (CDA). Specifically, the UDP recognises the site's potential to deliver a mixed use scheme which will be largely residential led. The UDP considers the site to be capable of accommodating 1,400 dwellings with potential to deliver a further 200 dwelling at South Quay.

- 3.8 Phase I of the development saw the construction of approximately 690 dwellings. This application represents Phase II and proposes up to a further 2,000 dwellings (inclusive of South Quay). As such the development will deliver up to 1,090 units above that anticipated by the Vale of Glamorgan within the UDP. This will significantly assist the Vale in meeting the authority's housing supply targets. Although a higher density scheme is being proposed the scheme will be well designed and developed to a high standard in order to safeguard the amenity of both the existing and future residents.
- 3.9 Although the Barry Waterfront scheme will be residential led the redevelopment of the site in isolation for residential purposes would not reflect government aspirations for sustainable mixed use communities. The creation of an active waterfront including bars and cafes is a key aspiration for the Council and developers providing a visitor destination as well as local services. Development of local offices, retail and a hotel use will provide local employment opportunities within an accessible district centre.
- 3.10 Therefore, in line with the existing UDP policy framework a comprehensive mixed use redevelopment of the site is the preferred approach in order to ensure that the physical, environmental, social and economic regeneration benefits are maximised. This approach was also reflected during consultation with both the Council and the local community.
- 3.11 The aspiration for regeneration of this site is enshrined within the Vale of Glamorgan UDP and the Barry Waterfront Development Principles Document which sees the site as an opportunity to create *"a sustainable new urban quarter with distinctive neighbourhoods, attractive places and community facilities that complement, integrate and link with Barry Town and Barry Island"*.
- 3.12 In conclusion, it is considered that the Vale of Glamorgan's strategy for Barry and the housing strategy for the Vale as a whole would be seriously undermined should this key strategic site not come forward for development as is currently proposed.

Consideration of Alternatives

- 3.13 In accordance with best practice and the requirements of the EIA Regulations, alternatives have been considered. This part of the ES provides *"an outline of the main alternatives studied by the developer and an indication of the main reasons for the choice, taking into account the environmental effects"*.
- 3.14 The consideration of alternatives includes the "Do Nothing" scenario, the consideration of alternative design and layout options, consideration of a higher density scheme and the consideration of the need for the proposed foodstore.

The "Do Nothing" Scenario

- 3.15 The Do Nothing scenario is considered to be untenable. Leaving the site in its current state would be contrary to National Planning objectives that seek to

prioritise development on brownfield land. A significant element of the development requirements of the Vale of Glamorgan currently identified in the UDP would therefore be transferred to greenfield sites on more peripheral and potentially less sustainable sites either in Barry or in lower order settlements.

- 3.16 The Do Nothing scenario would not make use of this valuable brownfield land asset and would not address significant contamination issues. It would also have significant implications for the Vale of Glamorgan's housing land strategy of which 25% is currently identified at Barry Waterfront.

Consideration of Alternative Design and Layout

- 3.17 The masterplan for Barry Waterfront has evolved over a two-year period involving regular consultation and review with Consortium members, the Vale of Glamorgan Council, the Welsh Assembly Government, Associated British Ports and the Design Commission for Wales.
- 3.18 Analysis of the physical constraints and potential connectivity led to the identification of a range of options in terms of form and character that the development might take. This led to alternative options for block layout, open space, hierarchy of roads, cycleway and footpath networks.
- 3.19 The creation of direct footpath and cycle links within and beyond the site has been a central driver of the scheme layout. In particular the need to deliver links to the three local railway stations has been a key consideration.
- 3.20 Another key determinant was the Council's requirement for a direct road through the site linking the town centre and Barry Island. Significant service runs had already been laid along the Council's preferred alignment for this route.
- 3.21 Alternative locations for the District Centre were considered. However, it was decided that a location adjacent the waterside would be preferable as its central location would maximise accessibility and its waterfront position deliver the opportunity for an attractive active destination.
- 3.22 Different public open space networks were also tested in relation to both existing and potential site connectivity, and a key aspiration of the stakeholders to establish a sustainable basis for design.
- 3.23 The initial responses to block layouts were driven by a reflection of existing grid patterns within Barry and Barry Island. These were then refined in response to a desire to maximise potential for passive solar gain.
- 3.24 Capitalising on the waterfront setting for residential properties has been another key consideration, with opportunities for views of water exploited wherever possible. Constraints such as the cliff face and associated overshadowing have also informed the layout.

- 3.25 It is considered that the proposed scheme at it stands is the most appropriate for this strategic site and will maximise the resulting physical, social, environmental and economic benefits.

Consideration of a Higher Density Residential Scheme

- 3.26 The Vale of Glamorgan's Development Principles Document for the site is seeking a mixed use scheme with a 'minimum of 2,000 new residential units' whereas this proposal seeks to provide up to 2,000 units. Therefore, the starting point for alternative land uses for the Barry Waterfront site is to consider the possibility for a higher density scheme.
- 3.27 A scheme with a much higher density of residential use would create a number of difficulties and ultimately it is considered that it would result in a less desirable scheme that does not reflect market demands.
- 3.28 Given the land available and the need to maintain an appropriate mix, a greater number of units would either require an increase in the number of flats accommodated on the site (and a subsequent increase in the storey height of the flatted developments) or the loss/reduction of other important elements of the scheme such as the amount of Public Open Space.
- 3.29 Concern is raised regarding the provision of significant additional flats/apartments on the site as this would be at odds with the consortium's experience of demand within the housing market. The house builders view is that the market for flats is very limited and is unlikely to recover within the immediate future. This analysis was shared by many of those at the recent exhibition in Barry who expressed a preference for more family housing.
- 3.30 Chapter D and the TA demonstrates that there are highways concerns that need to be addressed already within the Barry area. Whilst it is considered that these can be satisfactorily addressed through the current level of development this may not be the case of housing numbers were to increase significant beyond 2,000 dwellings.
- 3.31 On the basis of the above, it is considered that a higher density development scheme would be inappropriate on this site and would threaten the viability and desirability of the scheme.

Consideration of Need for Supermarket

- 3.32 Second to the residential element of the scheme will be the provision of approximately 8,825 sq m (gross) retail floorspace with the anchor element being the provision of a 6,525 sq. m (gross) supermarket.
- 3.33 In terms of the need for the proposed supermarket it should be recognised that the Vale of Glamorgan Retail Study (2009) considers there to be both a quantitative and qualitative retail need for an additional supermarket within

Barry. Therefore, in accordance with MIPPS 02/2005 this retail floorspace should be directed towards the town centre in the first instance.

- 3.34 As demonstrated by the accompanying retail assessment, there are no sequentially preferable sites within Barry of an area able to accommodate a new supermarket of the size required. As such Barry Waterfront is the most sequentially preferable site in planning terms and as such should represent the first choice for the location of a new supermarket. Indeed, providing a foodstore further outside of Barry could have significant implications for the town centre which will also have negative implications on sustainable shopping patterns.
- 3.35 The supermarket will also anchor the proposed District Centre and without it the District Centre will be less of an 'attractor'. It is further considered that the supermarket will promote linked trips to the proposed comparison retail units as well as the A3 units proposed at the Waterfront.
- 3.36 As discussed above, the proposed supermarket will be included within the first phase of development on the site and will be key to generating a positive cash flow in a climate where there are significant viability concerns to scheme delivery.
- 3.37 On the basis of the above, it is considered that the need for the proposed supermarket development has been clearly demonstrated. As such, it is considered that the proposed retail use is considered appropriate in terms of both type and scale.