

Barry Waterfront January 2010

09/00946/OUT

VALE OF GLAMORGAN
COUNCIL
AMENDED PLANS
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Environmental Statement Addendum Volume 2 Technical Studies and Appendices



**Residential Led Mixed Use
Development**

**ADDENDUM TO TECHNICAL
ASSESSMENTS**

**BARRY WATERFRONT
ENVIRONMENTAL STATEMENT**

On behalf of 'the Consortium':
Taylor Wimpey UK Ltd, Persimmon
Homes Ltd and BDW Trading Ltd
(Barratt South Wales)

January 2010

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***ENVIRONMENTAL
AND ECONOMIC
REGENERATION***

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1.0 Introduction & Background

Introduction

1.1 On 14th August 2009 Nathaniel Lichfield and Partners (NLP), on behalf of Taylor Wimpey UK Ltd, Persimmon Homes Ltd and BDW Trading Ltd (Barratt South Wales) ('the Consortium'), submitted duplicate planning applications to the Vale of Glamorgan Council (VoG) (application refs 2009/00946/OUT and 2009/00947/OUT) for a mixed use development at Barry Waterfront in the Vale of Glamorgan.

1.2 The application was accompanied by the Barry Waterfront Environmental Statement (ES) (August 2009) which set out the findings from the assessment of the environmental effects of the Development on:-

- Transportation;
- Landscape and Visual;
- Ecology;
- Archaeology;
- Water Resources, Drainage and Flooding;
- Ground Conditions and Contamination;
- Noise and Vibration;
- Air Quality;
- Socio-Economic Impacts; and
- Arboriculture.

1.3 Following submission of the application the Consortium has continued to consult with the VoG Council, statutory consultees and other key stakeholders and has received a number of comments and requests for clarification as a result of this process. There have been several minor amendments to the scheme both as a result of this consultation process and at the request of the Consortium.

1.4 Prior to formal consideration of the application by the VoG Council at committee, the Consortium wishes to submit additional information to explain the amendments to the scheme and also to respond to the comments and queries raised. It should be noted that responses remain outstanding from a number of consultees including the VoG Highways Department who has commissioned Capita Symonds to review the submitted transportation information including the Transport Assessment.

1.5 This document is submitted as an addendum to the Barry Waterfront ES (August 2009). It sets out the conclusions of an assessment of whether the changes made give rise to additional significant effects requiring mitigation and also provides clarification on various issues raised to date by consultees in relation to the Barry Waterfront ES (August 2009). The document is herewith

referred to as the Barry Waterfront ES Addendum (January 2010) and should be read in conjunction with the August 2009 submission.

- 1.6 The document has been prepared with regard to the Town & Country Planning (Environmental Impact Assessment) (England & Wales) Regulations 1999 (as amended) ('the 1999 Regulations') and Welsh Office Circular 11/99 Environmental Impact Assessment ('Circular 11/99') and associated best practice guidance.

Scope & Structure of Addendum

Background to Scoping the ES Addendum

- 1.7 The VoG Council has not issued a formal request for additional information in relation to the Barry Waterfront ES (August 2009) under Regulation 19 of the 1999 Regulations. As a result the scope of the ES Addendum has been defined by the Consortium's team based on the VoG feedback and consultation responses received to date.

- 1.8 In defining the scope of the ES Addendum, the team has had regard to Schedule 4 of the 1999 Regulations and guidance in paragraph 82 of Welsh Office Circular 11/99 that the focus of the ES should be on the 'main' or 'significant' environmental effects and that:-

"...In many cases, only a few of the effects will be significant and will need to be discussed in the ES in any great depth. Other impacts may be of little or no significance for the particular development in question and will need only very brief treatment to indicate that their possible relevance has been considered."

- 1.9 Some of the issues raised during the consultation process have little or no significance in relation to the EIA and, whilst they are described elsewhere in the additional information submitted, are not considered relevant to the scope of the ES Addendum. These include recommended planning conditions, detailed design and landscaping matters and clarification on minor issues in respect of the scheme that are outside the scope of the Barry Waterfront ES (August 2009).

Issues Addressed in the ES Addendum

- 1.10 The consultation responses that have been taken into account in defining the scope of the ES Addendum are: -

Consultee	Date	ES Topics Addressed
Glamorgan Gwent Arch. Trust	06/10/2009	Archaeology
VoG Council: Planning	25/11/2009	Socio Economic: Retail & Viability
Countryside Council for	27/11/2009	Ecology

Consultee	Date	ES Topics Addressed
Wales		
VoG Council: Pollution Control	30/11/2009	Ground Conditions and Contamination; Air Quality; Noise
Environment Agency Wales	09/12/2009	Water Resources, Flooding and Drainage; Ground Conditions and Contamination; Ecology; Landscape and Visual
VoG Council: Ecology	22/12/2009	Ecology
Welsh Water	23/12/2009	Drainage

Addendum Table 1.1

Consultation Responses considered in defining scope of ES Addendum (September 2009)

1.11

In addition to the information raised during consultation, and as set out above, several amendments to the scheme have now been incorporated. The ES Addendum has considered the following:-

- Inclusion of education (D1) and community uses (D1/D2) (up to 400 sq m);
- Changes to the orientation and height of development blocks within the District Centre (G1, G2 and G3);
- Amendments to Block H in the District Centre – this is now a single block as indicated on the amended parameter plan (SK203-Rev A) provided at **Appendix 2.2** to this ES Addendum;
- The inclusion of a small restaurant/café (A3) outlet at the eastern end of Arno Quay;
- The adaptation of a building at the eastern end of South Quay Waterside to form a focal building of up to 7 storeys in height; and
- The adaptation of a building in the south western corner East Quay to form a focal building of up to 5 storeys in height.

Scope of the ES Addendum

1.12

As a result of the above, a brief summary of the scope of the ES Addendum to the Barry Waterfront ES (August 2009) is set out below. Each chapter of the ES Addendum provides a full summary of the issues addressed:-

Barry Waterfront ES (August 2009)		Summary of Additional/Amended Information Provided in ES Addendum (January 2010)
1	Introduction	No additional information required
2	Approach to EIA	Clarification to the cumulative assessment regarding the Mole and land for educational use. Correction of appendix referencing; substitution of appendix B1 to NLP letter dated 27 th November 2007.
3	Site Description & Proposal	Updated details of the proposed development provided and review of Parameter Plan changes.
4	Transportation	Review of changes to parameter plans No additional information required at this time – awaiting feedback from Capita Symonds (on behalf of VoG Council). Clarification of which elements relate to the proposed uses for the Mole. Clarification of assessment detail and conclusions. Consideration of Barry Yacht Club, Jacksons Bay, RNLI, Barry Dock and PROWs in the assessment.
5	Landscape and Visual	Review of changes to parameter plans and consideration of amended building heights proposed. Clarifications regarding the inclusion of the school site and exclusion of the Mole in the assessment. Clarifications regarding terminology used.
6	Ecology	Planning policy update regarding TAN5. Clarifications through the assessment Review of changes to parameter plans. Review of responses from Countryside Council for Wales, Environment Agency and VoG Council Ecology department and comment.
7	Archaeology	Review of changes to parameter plans. Clarifications to previous assessment No additional information required as a result of the changes made to the scheme and no additional information requested by consultees.
8	Water Resources, Drainage and Flooding	Review of changes to parameter plans. Inclusion of new appendix to provide Environment Agency response to Strategic Level Flood Study.

Barry Waterfront ES (August 2009)		Summary of Additional/Amended Information Provided in ES Addendum (January 2010)
		Clarification of watercourses within the site and mitigation measures. Response/clarification to queries raised by Environment Agency, Welsh Water and VoG Council Pollution Control department.
9	Ground Conditions and Contamination	Review of changes to parameter plans. Response/clarification to queries raised by VoG Pollution Control department.
10	Noise and Vibration	Review of changes to parameter plans. Clarification of assessment. Clarification of terminology.
11	Air Quality	Review of changes to Parameter Plans. Review of responses raised by VoG Council Pollution Control department. Clarification of assessment.
12	Socio-Economics	Review of changes to Parameter Plans. Clarification of Retail Assessment findings and considerations. No additional information required as a result of the changes made to the scheme and no additional information requested by consultees.
13	Arboriculture	No additional information required as a result of the changes made to the scheme and no additional information requested by consultees.
14	Residual & Cumulative Effects	Clarifications provided.

Addendum Table 1.2 Clarification & Additional Information provided in the ES Addendum from Consultation Responses

Structure of Addendum

1.13

The ES Addendum comprises three separate volumes to reflect the three volumes which comprise the Barry Waterfront ES (August 2009):-

- i Volume 1 – A non-technical summary of the ES Addendum (the entire text of the non-technical summary has been updated for clarity).
- ii Volume 2 – Technical assessments and appendices of the key changes to the proposals, additional information requested and clarifications.

1.14

Each section provided within the scope of the ES Addendum replicates the structure of chapters within the Barry Waterfront ES (August 2009) for ease of comparison.

Changes to Description of Proposals provided in AGP ES (June 2009)

1.15

For completeness, Table 1.3 below summarises whether any amendments are required to the description of development provided in the Barry Waterfront ES (August 2009):-

Issue	Reference in Barry Waterfront ES (August 2009)	Updated in ES Addendum (September 2009)
Description of development	Paragraph 2.4 (Chapter C)	Amendment to include education and community uses
Plans (including masterplan and parameter plans)	Paragraph 3.5 (Chapter 2)	Amendments to plans summarised on schedule provided at Appendix A1 to this Addendum
Existing Site Description and area	Section 1 (Chapter C)	No change
Land uses	Section 2 (Chapter C)	Amendments to include education and community uses (D1) within application description
Layout	Section 2 (Chapter C)	Amendments to District Centre (see plans in Appendix B2)
Floorspace	Section 2 (Chapter C)	Inclusion of 400 sq m gross of community floorspace in District Centre
Height & Scale	Section 2 (Chapter C)	Amendments to height of focal buildings at South Quay Waterside and East Quay (see plans in Appendix B2)
Access and parking	Section 2 (Chapter C)	No change
Construction & Phasing	Section 2 (Chapter C)	No change
Cumulative Effects	Section 4 (Chapter B) Section 5 (Chapter N)	No change

Addendum Table 1.3 Update to Description of Development provided in Barry Waterfront ES (August 2009)

Availability of Document

- 1.16 A hard copy of the Barry Waterfront ES Addendum (January 2010) is available for viewing at the following office of the Vale of Glamorgan Council during normal working hours:-
- Development Control
The Vale of Glamorgan Council
Dock Office
Barry Docks
Barry
CF63 4RT
- 1.17 Any representations should be made in writing to the Vale of Glamorgan Council.
- 1.18 A Non-Technical Summary of this ES Addendum can be issued free of charge from Nathaniel Lichfield & Partners. An electronic CD-Rom version of the ES Addendum can be purchased from NLP for the cost of £25 excluding VAT. Please contact Maria Wilson of NLP on 02920 435 880.

2.0 Approach to EIA

Introduction

2.1 The 'Approach to EIA' section of the submitted Barry Waterfront ES (August 2009) has been amended to:

- Clarify the referencing of appendices to ES Chapter B;
- Substitute Appendix B1 to provide the correct Scoping Opinion;
- Clarify the status of the Mole within the EIA;
- Clarify the status of the education floorspace within the EIA; and
- To provide an updated key drawings list and attach appendix copies within the 'Assessment Methodology' section.

Undertaking the EIA

2.2 Paragraph 2.14 of the submitted Barry Waterfront ES (August 2009) refers to Appendix B1 and B2 whereas these are labelled as Appendices A and B to the rear of the report chapter. For clarification, Appendix A should be labelled B1 and Appendix B should be labelled B2.

2.3 Furthermore, **Appendix 2.1** should be substituted for the NLP letter dated 27th November 2007 attached at Appendix B1 to this Addendum, which is a request to the Vale of Glamorgan Council for a formal Scoping Opinion for mixed use development at Barry Waterfront.

2.4 Paragraphs 2.17 to 2.18 refer to the Scoping of the Environmental Statement and identify the land comprising the application site that is subject to EIA which includes West Pond, South Quay, Arno Quay and East Quay. For clarification, the Mole site under the ownership of Associated British Ports as it lies outside the Consortium's ownership and control. An assumption has been made however of leisure development floorspace (4,000 sq m) for the Mole as it is important that the application proposals do not prejudice the future comprehensive development of the UDP allocation. The Transport Assessment and Chapter D of the submitted ES (August 2009) therefore test the assumed leisure floorspace for robustness and to ensure that adequate access can be maintained for the future development of the Mole. This assumption has therefore also been tested through the Noise and Air Quality assessments as they use the same base data for traffic flows.

2.5 It was considered to be inappropriate to consider the Mole in other assessments such as the Landscape and Visual Impact Assessment as this will be dependent upon the type of development proposed on the Mole which, at the current time, is unknown. What is important is that the key infrastructure issues which could affect its development from these application proposals have been considered including the transportation section which also assesses a school of 2,760 sq m.

- 2.6 The application site does include the school site. The description of development within the submitted Barry Waterfront ES (August 2009) did not include the school within the description of development due to existence of the extant planning permission. For clarity this has since been amended and now includes reference to the development of the school site (see Paragraph 3.2 of this report) and has therefore been taken into consideration in the assessments that comprise this Environmental Statement Addendum.

Assessment Methodology

- 2.7 Some of key planning application drawings referred to at paragraph 3.5 of the Environmental Statement (August 2009) have now been updated and a list of the amended drawings and those superseded is attached as **Appendix 2.2**.
- 2.8 Paragraph 3.7 of the submitted Barry Waterfront ES (August 2009) considers the planning objective in relation to the outline planning application. For the avoidance of doubt the term 'reasonable degree of certainty' does not correspond to the requirements under the Regulations therefore Paragraph 3.7(i) should be replaced by the text below:

"The LPA is confident that it has taken into consideration the environmental information before issuing the decision notice for the application (being such information which is reasonably required to assess the environmental effects of the development)."

Consideration of Cumulative Effects

- 2.9 Paragraph 4.4 of the submitted ES (August 2009) identifies the Mole as forming part of the outline planning application. For reasons explained at Paragraphs 2.5 and 2.6 above, the Mole does not form part of the application site although it has been assessed in terms of the transportation, noise and air quality assessments to ensure that the development of Barry Waterfront does not prejudice the future ability of the Mole to come forward for development.
- 2.10 Whilst the Mole has been excluded from the illustrative masterplan the development of a school within Barry Waterfront has been included within the description of development. The school use was however already considered through the August 2009 Environmental Statement and as a result there is no subsequent further change to the submitted assessments to address this point.

3.0 Site Description and Proposals

Introduction

- 3.1 The Site Description and Proposals section of the submitted ES has been updated to reflect the minor amendments that have been made to the description of development, Illustrative Masterplan and the Parameter Plans on which the EIA has been based.

Description of Development Proposals

- 3.2 The description of development is to be amended to include education use (Use Class D1) and up to 400 sq m of community uses (Use Class D1/D2) within either Block F or Block G2 (see Parameter Plan SK202-Rev A – Appendix 2.2). The following description of development at paragraph 2.4 of the submitted Barry Waterfront ES (August 2009) should therefore be replaced as follows:

Development of vacant land at Barry Waterfront for residential (C3), retail (A1), cafes, bars and restaurants (A3), hotel (C1), offices (B1), community and leisure uses (D1 and D2). 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.

(denotes amendment to development description)

District Centre

- 3.3 The following minor amendments have been made to the District Centre development proposals since the submission of the application in August 2009:
- Inclusion of education uses (D1);
 - Inclusion of community uses (D1/D2) (up to 400 sq m) within Block G;
 - Changes to the orientation and height of development blocks within the District Centre (G1, G2 and G3); and
 - Amendments to Block H in the District Centre – this is now a single block as indicated on Parameter Plan SK202-Rev A.
- 3.4 In order to accommodate these minor changes Table C2 has been amended and should read as follows:

District Centre	
Area	7.11Ha
Uses	District Centre including: <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 • D1 Education • D1/D2 Community Uses
Layout	A range of A3, office, residential and community 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 education and associated playing field uses are proposed, with a mixed office and residential buildings to the north/east.
Floorspace/Units (gross external)	Offices: up to 3,450 sq m Hotel: up to 3,500 sq m School: up to 2,760 sq m Community use: up to 400 sq m Retail: up to 8,825 sq m Car park: up to 600 spaces Café, Restaurant and Drinking Establishments: up to 2,165 sq m Residential: 160 units (max) (plus an element of residential on Plot H) Petrol Filling Station: 72 sqm
Max Height and Scale	Non-Residential: Maximum 12 m (A1 retail unit) Residential/Mixed Use: 3-5 storeys at key location; 3-4 storeys fronting the waterfront
Phasing	Remediation & Construction: Phase 1A

Addendum Table C2 District Centre Development Summary

West Pond

- 3.5 No changes are proposed within this Character area and no amendments are required.

South Quay Parkside & Waterside

- 3.6 The following minor amendment has been made to the built form at South Quay Waterside since the submission of the application in August 2009:

- A focal building has been added at the eastern end of South Quay (5-7 storeys).

- 3.7 In order to accommodate this minor change Table C4 has been amended and should read as follows:

South Quay Parkside & Waterside	
Area	10.5 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	5-7 storeys at key location at the eastern end of South Quay Waterside; 3-4 storeys along waterfront and at key locations.
Phasing	Remediation: Phase 6 Construction: Phases 6, 7 and 8

Addendum Table C4 South Quay Parkside & Waterside Development Summary

Arno Quay

3.8 The following minor amendment has been made to the proposed development at Arno Quay since the submission of the application in August 2009:

- The land use has been amended to include a small ground floor A3 café/drinking establishment outlet of up to 200 sq m at the eastern end of Arno Quay.

3.9 In order to accommodate this minor change Table C5 has been amended and should read as follows:

Arno Quay	
Area	0.8 Ha
Uses	Residential and public open space A3 café/drinking establishment
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. A small café has been accommodated at ground floor level at the eastern end of Arno Quay.
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 A3 café/drinking establishment: Up to 200 sq m
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

Addendum Table C5

Arno Quay Development Summary

East Quay

3.10 The following minor amendment has been made to the proposed built form at East Quay since the submission of the application in August 2009:

- The addition of a focal building in the south western corner of the site (3-5 storeys).

3.11 In order to accommodate this minor change Table C6 has been amended and should read as follows:

East Quay	
Area	3.1 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 3-5 storeys at key location. Elsewhere maximum 3-storeys fronting the waterfront with 2-storey houses behind.
Phasing	Remediation & Construction: Phase 9

Addendum Table C6

East Quay Development Summary

3.12 No changes are proposed to the Access, Ecology & Landscape Strategy, Ground Strategy & Drainage, Construction and Phasing Considerations discussed within Chapter C of the submitted Environmental Statement (ES), which all remain valid.

Consideration of Alternatives

Need for the Development

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

their environmental affects. Further detail is provided within this section which now replaces Section 3 of chapter C of the Barry Waterfront ES (August 2009).

- 3.14 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.
- 3.15 The site is situated in a strategic and sustainable location 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.
- 3.16 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.
- 3.17 There are considerable barriers which face the successful regeneration of this brownfield site as 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.
- 3.18 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.
- 3.19 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 wider Barry Waterfront area to be capable of accommodating 1,400 dwellings with potential to deliver a further 200 dwellings at South Quay.
- 3.20 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.

- 3.21 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.
- 3.22 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.
- 3.23 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”*.
- 3.24 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

- 3.25 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”*.
- 3.26 The consideration of alternatives includes the “Do Nothing” scenario, the consideration of lower and higher density schemes, the consideration of the need for the proposed foodstore, and alternative designs/layout options and scheme phasing.

The “Do Nothing” Scenario

- 3.27 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.

The Do Nothing scenario would not make use of this valuable brownfield land asset and would not address significant contamination issues.

- 3.28 Existing housing supply is monitored through the annual Joint Housing Land Availability Studies (JHLAS) chaired by the Welsh Government. In the 2008 study Barry Waterfront was identified as contributing 496 dwellings, approximately 21% of the five year land supply. In total Barry Waterfront is identified as contributing 1,115 dwellings approximately 40% of the total housing land supply in the district.
- 3.29 The environmental effects of not developing this site would include the social economic impacts of not providing the additional housing or the requirement for significant alternative sites to provide significant housing in less sustainable locations. This would have far greater environmental effects compared to those resulting from the application proposals.
- 3.30 The 'Do Nothing' scenario also would not enable the integration between Barry Town and Barry Island through the built form and the new road link that is proposed to be developed as part of the Barry Waterfront development.
- 3.31 This scenario would also result in the site's ground contamination not being remediated. As a result this allocated site would continue to remain vacant and polluted as well as being an eyesore. This is not a realistic alternative for all parties concerned.
- 3.32 The 'Do Nothing' scenario would retain the existing biodiversity resource recorded at the site and, at least in the short-medium term, remove the significant ecological impact that has been revealed in the EIA. However the habitats and other ecological features (birds, reptiles etc.) currently present at the site have established in the period following its closure as part of the working port. In the 'do nothing scenario' and in the absence of any management, the process of natural vegetative succession would be likely to continue and ultimately (in the long term) scrub and trees would replace much of the existing grassland and brownfield mosaic. In the long term, a 'do nothing' scenario could retain the site as a biodiversity resource although the mosaic of habitats, and therefore the species they could support would change over time. For example, an increase in the scrub/tree cover would reduce the suitability of the site to support ground-nesting birds such as Skylark *Alauda arvensis*. Similarly, vegetative succession would result in a reduction in the brownfield mosaic (i.e. patches of bare ground/scrub/grassland etc) which could lead to a reduction in habitat suitability/availability for invertebrates.

Consideration of a Lower Density Residential Scheme

- 3.33 The UDP at paragraph 4.4.1 refers to the outline planning permission at Barry Waterfront and anticipates a yield of some 1400 units with a further 200 dwellings anticipated at South Quay. To date approximately 690 dwellings have been completed on the original Barry Waterfront scheme leaving a residual total

of 710 units anticipated within the UDP allocation plus the 200 dwellings envisaged at South Quay. Following the consideration of the “do nothing” scenario the next alternative is to therefore consider the development of the site for a lower density residential scheme in the range of 900 to 1000 units.

- 3.34 The delivery of a lower density scheme would require a more dispersed layout at odds with government guidance promoting the more efficient use of land. It is not considered that this alternative would deliver an acceptable urban design solution for this strategic site nor would it be acceptable in landscape and visual terms as a poorer relationship would be created between Barry Town Centre and Barry Island that failed to reflect the context of the surrounding built form.
- 3.35 On the basis of the Retail Assessment supporting the application, this alternative would also require a greater proportion of other uses including additional retail and office floorspace. It is considered that any significant increase above that proposed by the application would be likely to harm the vitality and viability of the town centre and would not be appropriate. It is also considered that a far greater provision of these uses is unlikely to be sustained by the market.
- 3.36 In addition a lower density development is unlikely to deliver a viable scheme particularly in relation to the need to tackle the site’s contamination and the on and off site infrastructure required to deliver the scheme proposals including the link road and off site junction highway works.
- 3.37 The site is critical to the provision of an adequate supply of housing within the Vale of Glamorgan. This option would not make the best use of this sustainable development location and is likely to require the development of sites in more peripheral and less potentially less sustainable sites either in Barry or in lower order settlements. The redevelopment of such dispersed sites are likely to result in sustainability effects as well as negative effects on transportation due to a potential greater reliance on the private car. The environmental effects of this alternative are likely to be far more significant than the redevelopment of the site for the submitted proposals. It is therefore imperative that a greater density is delivered.
- 3.38 Since the adoption of the UDP, the Council adopted in July 2009 its Development Principles document which states,
- 3.39 “It is expected that the development will deliver a high quality, high density scheme with a minimum of 2000 new residential units, a range of appropriate retail uses such as public houses, cafes, restaurants, and shops; leisure uses as well as business uses”.
- 3.40 As a result the Local Planning Authority would resist the low density alternative as the housing delivery would be well below the Local Planning Authority’s requirement.

Consideration of a Higher Density Residential Scheme

- 3.41 The Development Principles Document seeks a mixed use scheme with a minimum of 2,000 new residential units whereas the application proposal seeks to provide up to 2,000 units. Therefore a higher density scheme (above 2000 units) has been considered.
- 3.42 A scheme with a much higher residential density 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.
- 3.43 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.
- 3.44 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. There would therefore be socio economic impacts as this alternative would not deliver the housing accommodation sought by the local community or market.
- 3.45 Chapter D and the Transport Assessment 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. This would result in environmental effects which are potentially difficult to mitigate ie. larger improvement schemes would be required including a need for third party land and far greater costs. There would also be the consequential knock on impacts of greater noise and air quality effects to consider due to the greater traffic flows.
- 3.46 Additional environmental effects include the potential for greater landscape and visual effects due to the requirements for higher buildings. There would also be further potential infrastructure capacity issues on the local area to consider e.g. school capacity, public health, and local services. Many of the other environmental effects such as ecology, ground contamination and water effects would be similar to the application proposals or the lower density alternative as the site needs to be remediated and raised in level irrespective of the density of development pursued.

- 3.47 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 Foodstore

- 3.48 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.
- 3.49 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.
- 3.50 As demonstrated by the accompanying retail assessment (which is summarised in Chapter L), 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 and may well have to be located on a Greenfield site.
- 3.51 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.
- 3.52 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.
- 3.53 On the basis of the above, it is considered that the need for the proposed supermarket development is clearly demonstrated through the planning submission. As such, it is considered that the proposed retail use is considered appropriate in terms of both type and scale.

Consideration of Alternative Designs and Layout

- 3.54 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.

3.55 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 which are considered in the following paragraphs.

3.56 An additional **Appendix 3.1** is inserted into this section and presents a selection of the masterplan options considered through the evolution of the proposals.

Link Road and Traffic Management

3.57 A key determinant was the Council's requirement for a direct road through the site linking the town centre and Barry Island as set out in the Development Principles document. Significant service runs have already been laid along the VoG Council's preferred alignment for this route. No alternatives have been considered to this given that its provision is a key requirement of the Local Planning Authority. The alternative of continuing to route traffic through Barry Town Centre to Barry Island is not tenable and will lead to an increase of congestion and potentially harm the town centre's vitality and viability.

3.58 It is not considered that the dualling of the link road is appropriate as this will divide the community and not be compatible with adjacent residential units. As a result it is considered that the proposals provide the correct balance of link road infrastructure.

3.59 In addition, 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. Alternative access options have been considered due to the site's constraints including the railway sidings to the west and the Cliff to the east. This included a potential for a direct connection to the Barry Town railway station across the extensive sidings which was discussed with the Design Commission for Wales. Due to there being approximately 7 operational lines and sidings this option was considered to be unviable at the current time following a design review. The cost for such a structure would be too onerous and the health and safety implications of crossing at grade would not be acceptable to Network Rail. As a result the link via Hood Street underpass is now proposed. Should the sidings close in the future the submitted masterplan layout does not prejudice the implementation of such a potential more direct pedestrian link.

Location of the District Centre

3.60 Alternative locations for the District Centre have been considered including a more remote location to the west of the site in West Pond. These alternative locations were investigated in relation to visual and physical impact, contribution to the street scene and highways access, egress and servicing. This would potentially lessen the landscape and visual effects of the proposal although it would not be far less attractive to a potential operator. 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 with potential for linked trips. It also allows the shared use of the parking for the other complementary uses provided within the central District Centre.

- 3.61 The preferred option would be far more desirable to a potential operator and this is an important consideration given that the foodstore is key to generating a positive cash flow in a climate where there are significant viability concerns to scheme delivery. Other locations in East Quay and South Quay would not be appropriate in terms of land take and creating viable layouts; they are too disparate from the central hub of the site.

Public Open Space Network

- 3.62 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.

- 3.63 There are some clear parameters for the provision of open space which include the legal covenant and pie-crust lease on part of East Quay which restricts its use to open space provision. As a result the productive use of this land for open space had to be proposed.

- 3.64 It is evident that the submitted proposals are below the VoG standards on open space requirements. Alternative options were considered to provide the full quantum of open space required however it was considered that the proposals should represent an urban scheme with the focus on the quality of the public realm as opposed to the overall quantum. Should the open space be provided to meet the VoG's normal standards this would either require a lesser number of residential units or a higher density solution that would in turn further raise public open space. The environmental effects of these alternatives have been considered in the earlier paragraphs of this section. The proposals also seek to make use of water as a resource and a community facility is proposed to be a hub for the management of these facilities.

Residential Layout

- 3.65 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. Appendix C4 illustrates some of the options considered and the Design and Access Statement should also be referred to for more detail on design.

- 3.66 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.

- 3.67 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 Alternative Development Phasing

- 3.68 The overall construction period for the application proposals is estimated to be approximately 10 years from 2010 to 2020. Details of the phasing of development are set out in Chapter C of the Environmental Statement (August 2009) - the phasing programme and Illustrative Phasing Plan are provided at Appendices C2 and C3 to that report. The phasing and rate of development will be influenced by market conditions and is therefore may vary from the estimated programme. The proposed phasing is considered however to be a reasonable assumption based on the construction of approximately 175 units per year in initial phases, increasing to 225 per annum in later phases. This is considered to be an ambitious target with the current market conditions.
- 3.69 Options to reduce this phasing period were considered however as the current proposal is already ambitious it is not considered to be feasible to reduce the period.
- 3.70 Longer phasing options have also been considered (e.g. 15-20 years) however whilst this would have positive effects in employment generation it would extend the construction impacts which would have more negative effects on transport, air and noise effects. In addition, the point at which community facilities e.g. schools may be affected by increased demand will be delayed but conversely the delay could affect the take-up/viability of other uses such as the A3 outlets. Overall it would take longer to achieve a critical mass to the District Centre which is an important factor in creating the central heart of the scheme.
- 3.71 Finally an extended development programme would also have implications for the VoG's 5 year housing land supply with for other sites in more peripheral and potentially less sustainable locations being required in order to maintain an adequate supply as required in MIPPS.

4.0 **Transportation**

Introduction

4.1 This addendum to the transportation chapter of the Barry Waterfront ES (August 2008) has been prepared by Arup and should be read in conjunction with Chapter D. It considers the minor amendments made to the planning application as well as providing some clarifications to the previous chapter.

4.2 The minor changes to the planning application broadly relate to urban design issues (as set out in section 3) and do not alter the quantum of development proposed. The applicant is awaiting feedback from the Highway Authority and its advisors Capita regarding the application submission and as a result no substantive amendments have been considered through this addendum.

Planning Policy Context

4.3 There have been no changes to any relevant policy or guidance since the submission of the Environmental Statement that requires consideration within this chapter.

Assessment Methodology & Significance Criteria

Scope of Assessment

4.4 There have been no changes to this section.

Method of Baseline Data Collection

4.5 For clarification paragraph 3.6 of Chapter D of the ES contained a typographical error, and should read as follows:

4.6 Subsequent site visits have been undertaken periodically since the initial network inventory including a comprehensive link capacity assessment in December 2008. The information gained from these site visits has been a key element in the preparation of the Transport Assessment and accompanying assessment process.

Assessment Modelling

4.7 There have been no changes to this section.

Trip Demand Assessment

4.8 In order to clarify the land uses considered within the assessment of transportation effects and particularly for the Mole and school sites, paragraphs 3.15 and 3.16 of Chapter D of the ES should be replaced by the following:

4.9 There are a variety of different land uses proposed for the site. It is also pertinent to consider the potential future development of an area of land known as 'The Mole' under the separate ownership of Associated British Ports. Whilst The Mole does not form part of the Barry Waterfront planning application, in the future it will only be possible to access The Mole via the Barry Waterfront site.

4.10 As a result it is important to not prejudice the future comprehensive development and include an assumption of development on the Mole through the assessment of transportation effects. In addition to this, the application site will also provide an area of land to be developed as a school which is subject to an extant planning permission. Traffic generation for an assumed development of The Mole and a school within the West Pond area have therefore been factored in to ensure a robust assessment. Table D1a sets out the proposed development for the Barry Waterfront site, distributed over the three development areas of Arno Quay (AQ), East Quay (EQ), and West Pond/South Quay (WP/SQ), and assumed development of The Mole. This table sets out the development floorspace tested within the Transport Assessment which considers the worst case scenario of traffic impacts.

Land use	WP/SQ	AQ	EQ	The Mole	Total
Apartments (no. of units)	314	94	46	40	494
Affordable Apartments (no. of units)	75	23	12	10	120
Houses (no. of units)	983	18	150	35	1186
Affordable Houses (no. of units)	244	5	36	9	294
A1 Food Store (gross floor area m ²)	6,503				6,503 m ²
C1 Hotel (gross floor area m ²)	3,498				3,498 m ²
B1 Office (gross floor area m ²)	3,447				3,447 m ²
A1 Retail (gross floor area m ²)	2,323				2,323 m ²
A3 Food and Drink (gross floor area m ²)	1,686		130		1,816 m ²
D2 Leisure (gross floor area m ²)				4,000	4,000 m ²
D1 Primary School (gross floor area m ²)	2,760				2,760 m ²
Marina (parking spaces)				195	195
Petrol Filling Station (Service bays)	8				8

Addendum Table D1: Schedule of Development

4.11 It should be noted that there have slight revisions to the layout of the masterplan (including the inclusion of 400m² for community uses) since it was submitted with the Planning Application in June 2009, however this does not

affect the overall level of development proposed or the outcomes of the previously submitted assessment.

Method of Assessment of Effects

4.12 In order to clarify the Method of Assessment of Effects, paragraph 3.25 of Chapter D of the ES should be amended as follows:

4.13 IEMA Guidelines for the Environmental Assessment state: *“Highway links should be assessed when traffic flows have increased by more than 30% or other sensitive areas are affected by traffic increases of at least 10%”*. The Barry Waterfront proposals will have a significant effect on the local highway network, therefore a comprehensive network of highway links and junctions was agreed with the local highway authority and assessed. This network covers all routes where development traffic is likely to lead to an increase of 10% or more.

4.14 The results of the individual link and junction assessments are then used to assess whether the effects of the development (where relevant including mitigation measures) are adverse or beneficial and the level: major, moderate, minor, moderate or negligible of the effects. The summary tables are based on an overall judgement of the effects across all links and junctions.

Significance Criteria

4.15 There have been no changes to this section.

Baseline Conditions

4.16 There have been no changes to this section.

Potential Impacts

4.17 It should be noted that the changes to the proposals detailed in paragraph 1.12 are minor in nature and would result in no material change to the effects documented in the original ES.

Impacts During Construction

4.18 It should be noted that the level of construction traffic will be an order of magnitude less than the vehicular traffic associated with the completed development. The maximum number of daily construction movements is estimated to be around 430 movements in comparison to post-construction daily development traffic movements of around 24,000 (2020 AAWT movements into all three areas of the development). The impacts on all junctions will therefore be significantly less than that of the completed development. Prior to construction activity it will be essential to agree approved routes to the site with the local Highway Authority and also to ensure that the swept path of large vehicles can be accommodated along the routes.

4.19 The timing of larger loads and vehicles can have a significant effect on minimising local highway congestion which typically have notable peaks in the morning and evening coinciding with commuter movements, by scheduling large vehicle movements outside the peak hours the developer can also minimise lost time and fuel consumption.

4.20 As a result of the lower volumes of traffic during construction and the variability of activity through different phases of construction it is not considered necessary to calculate its impact but instead undertake a qualitative assessment.

Impacts After Completion

4.21 There have been no changes to this section.

Mitigation Measures

Impacts During Construction

4.22 There have been no changes to this section.

Impacts After Completion

4.23 In order to clarify the impact of the proposed highway network improvements, the following two paragraphs should be inserted before paragraph 6.8 of section D of the ES:

4.24 There are significant proposed additions to the local highway network as a result of the Barry Waterfront development. The proposed through road from Ffordd-y-Mileniwm to Barry Island will complete a missing link of the local highway network and offer an alternative link and additional capacity to Barry Island.

4.25 The construction of this new link will also provide for future access to The Mole; suitable for large vehicles towing boats and also a new connection through to the Yacht Club/Jackson Bay/RNLI area via South Quay.

4.26 In addition, paragraph 6.8 should be amended as follows in order to clarify the role of the road through the Barry Waterfront site and any effect on the wider highway network:

4.27 Elsewhere there are no fundamental changes proposed to the function or connectivity of the local highway network including access to Barry Docks. However, in order to minimise the impact of the development on the highway network, a number of possible junction improvement schemes have been identified and assessed. These junctions would otherwise operate over capacity either as a result of increased traffic resulting from growth in base traffic, increased traffic related to Waterfront Barry traffic or a combination of both.

Residual and Cumulative Effects

- 4.28 It should be noted that Tables D15 and D16 in the ES summarise the residual impact of traffic associated with the development. Due to the scale of the assessment exercise undertaken in the Transport Assessment, these tables can only provide a summary of the total effects, rather than for each of the 24 junctions and 33 highway links considered, and is a matter of judgement and understanding of the local highway network. Further details, considering each junction separately can be found in the Transport Assessment report, included as an Appendix to the ES.
- 4.29 Table D16 (not included in the original Environmental Statement) is an extract from the Transport Assessment and gives an overview of the junction capacity assessment. The table presents three scenarios, the first for 2020 without the Barry Waterfront Development, the second for 2020 with the Barry Waterfront development but without any mitigation works at highway junctions and the third for 2020 with the Barry Waterfront development and the proposed mitigating works at those junctions descriptions shaded blue. Green boxes represent junctions operating within practical capacity, red boxes represent junctions operating over practical capacity.

Junction		2020 without Barry Waterfront	2020 with Barry Waterfront without Mitigation
3	Merrie Harrier Signals Junction		
4	Murch Crossroads		
5	Biglis Roundabout		
6	Port Road/Barry Docks Link Road Roundabout		
7	Waycock Cross Roundabout		
8	Harbour Road/Station Approach/Paget Road Roundabout		
	Harbour Road/Earl Crescent Priority		
9	Harbour Road/Nicholas Road (Ship gyratory) Priority		
	Harbour Road/Broad Street (Ship gyratory) Priority		
	The Parade/Harbour Road Mini Roundabout		
10	Gladstone Bridge Roundabout		
	Dock View Road Gyratory		
11	Buttrills Road/Barry Road Staggered Junction		
12	Barry Road/Ty Newydd Road/Cemetery Road roundabout		
13	Gladstone Road/Cardiff Road/Ffordd Y Mileniwm		
14	Palmerston Road/Cardiff Road Signals Junction		
15	Vere Street/Cardiff Road/Gladstone Road - Mini Roundabout		
	Cardiff Road/Holton Road/Gladstone Rise - Priority T-junction		
16	Wimbourne Road/Ffordd Y Mileniwm Priority T-junction		
17	Cory Way/Ffordd Y Mileniwm Roundabout		
18	Subway Road/Ffordd Y Mileniwm Priority left in/left out		
19	Y Rhodfa/Ffordd Y Mileniwm/Clos Tynaid Glo Roundabout		
20	Retail/Morrisons/Ffordd Y Mileniwm Roundabout		
21	Gladstone Bridge/Ffordd Y Mileniwm Roundabout		
22	Plymouth Road/Earl Crescent roundabout		
23	Broad Street / Hood Road Signals		

Addendum Table D16: Junction Capacity Summary

- 4.30 It is apparent from the table that mitigation measures could provide a highway network capable of accommodating both the forecast growth in traffic and the development traffic at the majority of external junctions. In addition these measures would improve the control of traffic and in several cases an improved opportunity for pedestrians to cross roads.
- 4.31 Further details, considering each junction separately can be found in the Transport Assessment report, included as an Appendix to the ES.
- 4.32 A decrease in junction capacity is adverse and an increase in capacity (as a result of traffic using other routes or mitigation works) is beneficial. In order to group the junctions if the majority of junctions worsen this is considered a major effect whereas if the standard of operation is only affected to a slight degree at very few junctions or links this would be considered a negligible effect. Where the effect of an impact is the same across a group of environmental topics the impacts have been grouped. This is considered appropriate since many of the topics are related; for example pedestrian amenity and personal security.
- 4.33 Tables D14 and D15 are revised here to establish whether effects are beneficial or adverse:

Environmental Topic	Description of Impact		Description of Mitigation Measures	Description of Residual Impact	
	Description	Significance		Description	Significance
Severance	Increase in traffic flows	Minor adverse, Direct, Medium Term, Temporary	Registration of the site with considerate constructors and implementation of Construction Environmental Management Plan	Increase in traffic flows	Negligible adverse; Direct, Medium Term, Temporary
Pedestrian Amenity					
Cycle Amenity					
Personal Security					
Road Safety					
Junction Capacity	Increase in traffic flows	Minor adverse; Direct, Medium Term, Temporary	Some junction mitigation works may be progressed during construction period easing existing congestion issues	Increase in traffic flows	Negligible adverse; Direct, Medium Term Temporary

Addendum Table D14:

Residual Impact – Construction Phase

Environmental Topic	Description of Impact		Description of Mitigation Measures	Description of Residual Impact			
	Description	Significance		Description	Significance		
Severance	Increase in traffic flows	Moderate adverse, Direct, Permanent, Long term	Direct footway/cycleway route to Hood Road rail underpass Provision of pedestrian crossings throughout site	Increase in Traffic Flows	Minor beneficial Direct, Permanent, Long term		
Pedestrian Amenity			Direct footway/cycleway route to Hood Road rail underpass Provision of pedestrian crossings throughout site			Increase in Traffic Flows but with improvements to pedestrian network	
Cycle Amenity			Waterside cycle route provision Secure covered cycle parking at all residential elements. Integration with existing surrounding cycle route network Cycle parking				Increase in Traffic Flows
Public Transport			Improved access to public transport via direct routes Improved public transport services			Decreased highway demand Modal shift	

Personal security	Increase in traffic flows	Moderate adverse, Direct, Permanent, Long term	Increase in traffic likely to have a positive effect due to increased surveillance and activity	Increase in Traffic Flows	Minor beneficial Direct, permanent, long term
Road Safety			Improved lighting and maintenance of pedestrian routes		
			Construction of high quality crossing facilities	Increase in Traffic Flows	Minor beneficial; Direct, Permanent, Long term
			Design of roads to national standards		
Highway junctions operating over capacity	Poor operational efficiency and increase in queue length Congestion and an increase in Traffic flows resulting in noise and air pollution	Moderate adverse Direct Permanent Long-Term	Negotiation of funding for replacement of existing junctions with high capacity replacements.	Improved highway capacity, decreased queuing and associated environmental effects	Minor beneficial Direct, Permanent Long-Term Local
			Several of the proposed junctions are signalised providing improved pedestrian facilities		
			Negotiation of funding for remodelling of existing junctions alteration of lane numbers, geometry, introduction of traffic signals.	Improved highway capacity, decreased queuing and associated environmental effects	Minor beneficial Direct, Permanent Long-Term Local

Addendum Table D15:

Residual Impacts – Operational Phase

- 4.49 Despite minor changes to the proposed masterplan and development it is considered these do not affect the assessed residual effects of the development.

Summary and Conclusions

- 4.50 The summary and Summary and Conclusions of Chapter D of the ES remain unchanged. It should be noted that this provides an overview of the detailed assessment undertaken in the Transport Assessment, and as such further details should be sought in the Transport Assessment report.

5.0 Landscape and Visual

Introduction

5.1 This addendum to the Landscape and Visual Chapter of the Barry Waterfront ES (August 2009) has been prepared by Soltys Brewster Consulting and should be read in conjunction with Chapter E.

5.2 The Addendum addresses any relevant feedback received to date from the Vale of Glamorgan Council and the Countryside Council for Wales. It also assesses the likely landscape and visual impacts on landscape character and visual amenity that arise from minor amendments that have been made to the Masterplan layout following submission of the planning application in August 2009. The key changes to the Masterplan regarding this ES chapter are as follows:

- Addition of a 3 storey mixed used development (Blocks G2 and G3) to the western boundary that abuts the Mole and District Centre.
- Amendment to the commercial/retail building, located within the District Centre, southeast of the proposed supermarket (Block G1). The building will remain at a maximum height of 5 storeys, however the overall mass and form of building has been amended and now 'steps' down to a minimum height of 3 storeys as opposed to 2, as previously proposed.
- Amendment to the location of the feature residential block, situated to the eastern edge of South Quay Waterside. This block will typically be 5-7 storeys in height.
- Amendment to create a feature residential block, situated in the south western corner of East Quay, of a maximum 3-5 storeys in height.

Policy Context

5.3 There has been no change to legislation or guidance since the planning application was submitted.

Assessment Methodology & Significance Criteria

5.4 There has been no change to the methodology used to assess landscape and visual effects.

Baseline Conditions

5.5 There has been no change to the baseline conditions that are described within Section 4, Chapter E of the ES since the planning application was submitted and therefore this chapter remains valid.

5.6 To clarify how the terms in paragraph 4.38 reflect the terms set out in Table E4.4 of the submitted Barry Waterfront ES (August 2009), paragraph 4.38 and Table E4.4 have been amended and should be read as follows:

5.7

Features such as buildings, vegetation, topography and local landform all influence the extent of views within each of the character areas. Whether views are very short distance (< 100m), short distance (100 to 250 metres), medium distance (250 to 1000 metres), or long distance (> 1000 metres), enclosed and intimate or unrestricted and panoramic depends on the interaction between a building's built form, scale and juxtaposition with one another.

Character Area	Visual Appraisal and Key Influencing Factors
Barry Central Core	Most views within the character area are restricted to short to medium distance views by built form. There are some good long distance views across the docks and the Bristol Channel from the more elevated locations along Dock View Road.
Barry Docks	Good long distance views south towards the Barry Island peninsula and the elevated residential areas to the north of Broad Street. Other medium to long distance views restricted by topography and local built form.
Barry Island	Excellent long distance views across the Bristol Channel towards the Somerset coast from Whitmore Bay, Friar's Point and Nell's Point. The latter also provides good long distance views further to the east across the industrial works and towards Sully and its coastline. From the north east edge of the character area there are good medium distance views towards the eastern and northern portions of the site and long distance views to the town of Barry beyond. Views to the west are primarily very short, being predominately restricted by vegetation and the topography of the adjacent escarpment.
Eastern Industrial Fringe	Views within this flat landscape are predominantly restricted by vegetation and built form. There are some restricted long distance views towards the more elevated residential area within the Northern Suburbs.
North Eastern Terraced Housing	Views restricted to very short distance views by the tight urban grain that is found throughout the character area.
Northern Suburbs	Local built form restricts views to medium and long distance views only. There are some glimpsed long distance views across the docks and towards the Bristol

	Channel from the lower section of Ty-newydd Road, to the south of the character area.
The Knap	Good long distance views from the coastal areas across the Bristol Channel. Other views within the character area are typically restricted by built form and vegetation. However, there are some good long distance views towards Nell's Point and the Bristol Channel from within the Garden Suburb.
Western Terraced Housing	Some good long distance views east across the docks, the Industrial Works and Sully Moors beyond from the western edge of the character area. Glimpsed views of Barry Island and the Bristol Channel between built form can be seen from Jenner Road, which dissects the centre of the character area. Additional glimpsed views of the docks from elevated residential streets, such as Trinity Street. Other views restricted to short and medium distance, by built form.

Addendum Table E4.4: Visibility within differing townscape character types

- 5.8 The criteria stated within paragraph 4.38 have also been adopted when describing views from the eight selected viewpoint locations within the viewpoint analysis section of the Landscape and Visual chapter of the submitted ES (paragraphs 5.16 – 5.116).

Potential Impacts

- 5.9 To confirm, the Mole has been excluded from the landscape and visual assessment for the reason stated within paragraph 5.1 of the submitted ES (August 2009) i.e. it falls outside of the current application boundary. This is still applicable and therefore no assessment of potential impacts on the Mole in terms of effects on landscape character and visual amenity as a result of the proposed Barry Waterfront development have been included within this Addendum. Conversely, the area of land provided for educational use is within the application boundary and is therefore included within the landscape and visual assessment.
- 5.10 To clarify how the terms in paragraph 4.38 reflect the terms set out in Viewpoint 2 of the submitted Barry Waterfront ES (August 2009), the following viewpoint assessment text has been amended and should be read as follows:

Viewpoint 2: Former Dock Offices

5.11 **Landscape Character Area:** Barry Docks

5.12 **Type and Sensitivity of Receptor:** Office workers and visitors to council offices, considered to be low sensitivity.

5.13 **Existing View:** From this location with the car park of the former Dock Offices, beyond Ffordd y Mileniwm, the flat expanse of land that contains the former graving dock is prominent within foreground views. Beyond, the industrial units and storage container yards concentrated around Number 2 Dock can be seen. To the right a new development of three to five storey apartment blocks and the peninsula to Barry Island restrict long distance views east. To the far left of the view, the industrial area that contain the Romilly Units is visible, as is the large Rank Hovis Atlantic Mills building and a tower within the industrial works, both of which break the skyline.

Construction Phase

5.14 **Predicted View:** From this very short distance location views of the construction work will be unavoidable and will quickly change the nature of the view. The site hoardings will obscure ground level construction activity, however the cranes used during the construction of the residential blocks will be a prominent feature of the skyline.

5.15 **Magnitude of Change** Though views from this location already contain industrial activity associated with Number 2 Dock, the scale of the construction involved in the development of East Quay will be significantly greater and instantly more noticeable within the view. The balance of these factors gives a magnitude of effect on visual amenity of high.

5.16 **Visual Effect:** As the sensitivity of receptors at the viewpoint is low, and the magnitude of change is high, the level of significance of effect on visual amenity is considered to be minor to moderate. Once again, the clear unobstructed view of construction activity and especially of any cranes, though temporary in nature will create a negative feature within the view. The visual effect is therefore considered to be **minor-moderate negative**.

Year 1 Following Completion

5.17 **Predicted View:** The worst case effect of the proposed development is illustrated by the illustrative visualisation in Figures E16a/b. It is predicted that there will be good very short to short distance views across East Quay and towards the houses south of the park. Views of the housing will be partially filtered by proposed tree planting that will surround the park. Looking across Number 1 Dock, the row of houses that are proposed to South Quay Waterside will be visible. All other development within the site boundary will be obscured from view by the nearby existing apartment block to Ffordd y Mileniwm.

5.18 **Magnitude of Change:** The view will change from one dominated by development associated with the docks to one dominated by housing, reinforcing the changes to the urban character that have occurred in recent years within this area of the docks. The park will create a visual focus point and a buffer between the existing development along Ffordd y Mileniwm and the three-storey development to East Quay. The balance of these factors gives a magnitude of effect on visual amenity of high.

5.19 **Visual Effect:** As the sensitivity of receptors at the viewpoint is low and the magnitude of change is high, the level of significance of effect on visual amenity is considered to be minor – moderate. The positive resultant regeneration and the newly establish public park, with good visual amenity in the foreground, will benefit the existing baseline view. The visual effect is therefore considered to be **minor - moderate beneficial**.

Year 10 Following Completion

5.20 **Predicted View:** The worse case effect of the proposed development is illustrated by the illustrative visualisation in Figure E16c. Views towards the residential units to East Quay will be further restricted as tree planting within the public park establishes, resulting in only glimpsed views of the houses and landscape beyond.

5.21 **Magnitude of Change:** As the trees mature within the public park they will create a prominent and well-defined open space that will provide a strong focal point to the eastern edge of the development. The balance of these factors gives a magnitude of effect on visual amenity of high.

5.22 **Visual Effect:** As the sensitivity of receptors at the viewpoint is high and the magnitude of change is medium to high, the level of significance of effect on visual amenity is considered to be major. Therefore the visual effect is considered to be **major beneficial**.

5.23 Following minor amendments to the Masterplan and to paragraph 4.38, Viewpoint 5 has been updated to reflect the changes to the Masterplan and the terms set out in paragraph 4.38 and should be read as follows:

Viewpoint 5: Ffordd Sealand/Ffordd y Mileniwm

5.24 **Landscape Character Area:** Barry Docks

5.25 **Type and Sensitivity of Receptor:** Residents and pedestrians, considered to be high sensitivity.

5.26 **Existing View:** From this very short distance viewpoint there are good, unobstructed views south across Number 1 Dock, The Mole and to the housing located on the Barry Island peninsula, which are all prominent features within the centre of the view. To the far left of the view the apartment blocks that are located near to the former Dock Offices can be seen in the distance, as can the

industrial units and storage containers to Number 2 Dock. To the right, there are glimpsed views of the large Victorian terraced housing that is located along Harbour Road and Park Avenue. The tower and roof to All Saint's Church on Park Road forms a feature on the skyline.

Construction Phase

- 5.27 **Predicted View:** From this location the building phase to the District Centre, West Pond and South Quay Waterside will be evident within the view, with the cranes clearly visible as part of the skyline. The cranes to South Quay Waterside (Phases 6-8) will also be the most visual element of that phase of construction works, however they are likely to be viewed against the escarpment and housing within Barry Island, reducing impacts. Views of construction work at Arno Quay and East Quay will be restricted by vegetation or viewed from a distance and therefore not considered to be significant.
- 5.28 **Magnitude of Change:** The effects of the cranes to the construction of the District Centre, West Pond and West Quay Parkside will result in the greatest effects as the cranes will be a temporary, yet dominant feature to the skyline. Site hoardings may obscure ground level activity. The balance of these factors gives a magnitude of effect on visual amenity of high.
- 5.29 **Visual Effect:** As the sensitivity of receptors at the viewpoint is high and the magnitude of change is high the level of significance of effect on visual amenity is considered to be major. Views of any detracting elements within the view will be temporary though major during their duration, therefore the visual effect is considered to be **major negative**.

Year 1 Following Completion

- 5.30 **Predicted View:** The worst case effect of the proposed development is illustrated by the illustrative visualisation in Figures E19a/b. From this location, there will be good views across The Mole, towards the houses and public open spaces proposed to South Quay Waterside and the adjacent South Quay Parkside, creating a clear urban and active edge to the dockside. Visible above the roofline of the houses will be the existing housing on the distinctive skyline of Barry Island peninsula. Number 1 Dock will be further enclosed by the three storey developments proposed to the eastern edge of the District Centre (Blocks F, G2 and G3). Developments to the edge of Number 1 Dock will constrain views of the proposed supermarket and also long distance views to the west, including the housing at West Pond. The tree lined public realm waterfront to the district centre and more distant views of green open space along South Quay Waterside will contribute to views. To the left, the park and residential units that face the dock to East Quay will be visible, with glimpsed views between existing vegetation of the development at Arno Quay.
- 5.31 **Magnitude of Change:** Though views across the open water of Number 1 Dock will be retained, the development to the District Centre and South Quay Waterside in particular will create a sense of enclosure, visually connecting the

built form of Barry Island with that of the town. The balance of these factors gives a magnitude of effect on visual amenity of high.

- 5.32 **Visual Effect:** As the sensitivity of receptors at the viewpoint is high and the magnitude of change is high, the level of significance of effect on visual amenity is considered to be major. The positive mix, grains and textures of built form, public realm, street trees and green open space will create a positive and vibrant view. The visual effect is therefore considered to be **major beneficial**.

Year 10 Following Completion

- 5.33 **Predicted View:** The worse case effect of the proposed development is illustrated by the illustrative visualisation in Figure E19c. The street trees along the eastern edge of the District Centre and to South Quay Waterside will provide a mature setting to the public realm once established.

- 5.34 **Magnitude of Change:** The establishment of the street trees will further enhance the visual setting of the development within the townscape. The balance of these factors gives a magnitude of effect on visual amenity of high.

Visual Effect: As the sensitivity of receptors at the viewpoint is high and the magnitude of change is high' the level of significance of effect on visual amenity is considered to be major. The positive effects of the mature street trees in terms of the visual enhancements that they provide from this location, results in visual effects being **major beneficial**.

- 5.35 Following the addition of a three storey mixed use development (Blocks G2 and G3) to the eastern edge of the District Centre, the visual assessment text for Viewpoint 7 has been amended and should be read as follows:

Viewpoint 7: Trinity Street

- 5.36 **Landscape Character Area:** Western Terraced Housing

- 5.37 **Type and Sensitivity of Receptor:** Residents (secondary view) and pedestrians, considered to be medium sensitivity.

- 5.38 **Existing View:** The terraced housing either side of the narrow residential street restricts most medium to long distance views from this elevated location. There are views of the western edge of Number 1 Dock, including a section of the Mole and a small area of land that is proposed for development. Beyond the site, there are good views of the housing within Barry Island and the Bristol Channel. Within the centre of the view, rising above the mature trees that line Broad Street, is the chimney to the North Hydraulic Pumping House. The tower to Holy Trinity Presbyterian Church can also be seen to the left of the chimney, at the junction of St. Paul's Avenue.

Construction Phase

- 5.39 **Predicted View:** Construction work to the District Centre (Phases 1A and 2) will be relatively prominent within the view, as may the building phase to the western edge of South Quay Waterside (Phase 6). From this location the main construction activity visible will be the operation of the cranes, which will contrast against the backdrop to the sky and housing on the Barry Island peninsula.
- 5.40 **Magnitude of Change:** While there may be some perception of activity during the construction phase, it will not form an immediately apparent feature within the view. The balance of these factors gives a magnitude of effect on visual amenity of low.
- 5.41 **Visual Effect:** As the sensitivity of receptors at the viewpoint is medium and the magnitude of change is low, the level of significance of effect on visual amenity is considered to be minor. Views of any detracting elements within the view will be temporary, therefore the visual effect is considered to be **minor negative**.

Year 1 Following Completion

- 5.42 **Predicted View:** The worst case effect of the proposed development is illustrated by the illustrative visualisation in Figures E21a/b. Beyond the dominant foreground of traditional terraces, the western edge of the District Centre (including the three storey developments proposed to the dock edge (Blocks F, G2 and G3) and glimpses of the hotel/offices and supermarket) may be visible from this location, in the distance. However, the overall view is likely to remain dominated by the traditional terraces in the foreground, the proposed development infilling between foreground residential and the principally residential development on Barry Island. The chimney stack of the disused dock building in the mid ground will remain a dominant vertical element. The three-storey housing to South Quay Parkside and South Quay Waterside will be seen at the foot of the escarpment across The Mole. Views towards Arno Quay and East Quay will be obscured from view by existing built form. The skyline will remain unchanged.
- 5.43 **Magnitude of Change:** While there may be some perception of change, the view will remain that of a traditional street. The proposed developments will be viewed as an extension to the existing built form, both in terms of scale and character, connecting the town with Barry Island. The balance of these factors gives a magnitude of effect on visual amenity of medium to low.
- 5.44 **Visual Effect:** As the sensitivity of receptors at the viewpoint is medium and the magnitude of change is medium to low, the level of significance of effect on visual amenity is considered to be minor to moderate. The positive resultant regeneration infilling between Barry and Barry Island will benefit the existing baseline view, which remains dominated by the foreground. The visual effect is therefore considered to be **minor to moderate beneficial**.

Year 10 Following Completion

- 5.45 **Predicted View:** The worse case effect of the proposed development is illustrated by the illustrative visualisation in Figure E21c. The predominant change in the view at this stage of the development would be the view of the street trees to the public realm along the eastern edge and within the District Centre itself.
- 5.46 **Magnitude of Change:** The trees will visually link with the existing mature trees within Broad Street, contributing to the enhancement of views. The balance of these factors gives a magnitude of effect on visual amenity of medium.
- 5.47 **Visual Effect:** As the sensitivity of receptors at the viewpoint is medium and the magnitude of change is medium, the level of significance of effect on visual amenity is considered to be moderate. The street trees will provide a positive contribution to the green structure within and surrounding the site, therefore the visual effect is considered to be **moderate beneficial**.
- 5.48 The proposed minor amendments to the Masterplan layout will have no effects on landscape character or visual amenity from the eight selected viewpoints within the 2km study area. Therefore no amendments to the illustrative block model images (figures E15a – E22c) that were included as part of the submitted ES (August 2009), has been made.

Mitigation Measures

- 5.49 No additional significant environmental impacts arise in relation to the alteration considered in this ES Addendum or that have been highlighted by the additional assessment undertaken, therefore additional mitigation measures are not required.

Residual and Cumulative Effects

- 5.50 There is no change to the overall residual effects of the development.
- 5.51 To clarify how the terms in paragraph 4.38 reflect the terms set out in paragraph 7.1 of the submitted Barry Waterfront ES (August 2009), paragraph 7.1 has been amended and should be read as follows:
- 5.52 Mitigation measures such as the use of site hoardings will reduce visual impacts, particularly from very short distance locations, where ground level construction activity may be obscured. However, with the mitigation measures in place, adverse impacts will occur as views of construction work and equipment will remain. Visual impacts will predominately be a result of the cranes, which compared to other site work and equipment, will be visible from both short and more distant locations. All adverse impacts however, will be short term/temporary and restricted to the length of the construction programme. In addition, through the use of a phased construction programme, impacts will be reduced, as the amount of construction work on site will be kept

to a minimum and limit the proportion of construction activity that is seen within the view. Therefore, residual impacts during the construction phase are considered to be moderate to major adverse at worst

5.53 To clarify how the terms in paragraph 4.38 reflect the terms set out in paragraph 8.5, plus Tables E8.1, E8.2 and E8.3 of the submitted Barry Waterfront ES (August 2009), the following paragraph and tables have been amended respectively and should be read as follows:

5.54 Views of the proposed site from the eight viewpoints are currently dominated by the large expansive area of derelict and contaminated land associated with Barry Docks, especially from short and very short distance locations, for example viewpoints 2 to 6. From the majority of the locations effects on visual amenity are considered to be beneficial rather than adverse, as views typically change from that of a townscape that is in decline to one that has been regenerated, with a more aesthetic, coherent urban townscape that compliments the existing built form.

Viewpoint No.	Location Description	Approx distance to development boundary (metres/nearest development)	Range of View	Significance of effects During Construction	Type of Effect During Construction Adverse/ Neutral/ Beneficial
1	Dock View Road	265m - East Quay	Medium	Major	Negative
2	Former Dock Offices	30m -East Quay	Very Short	Minor-Moderate	Negative
3	Clive Road, Barry Island	10m - South Quay Waterside	Very Short	Moderate-Major	Negative
4	Junction of Harbour Road & Broad Street (A4055)	235m - West Pond	Short	Moderate-Major	Negative
5	Ffordd Sealand/ Ffordd y Mileniwm	25m - District Centre	Very Short	Major	Negative

Viewpoint No.	Location Description	Approx distance to development boundary (metres/nearest development)	Range of View	Significance of effects During Construction	Type of Effect During Construction Adverse/ Neutral/ Beneficial
6	Footway, nr Gladstone Road Bridge	115m - Arno Quay	Short	Moderate-Major	Negative
7	Trinity Street	560m - District Centre	Medium	Minor	Negative
8	College Road	520m - Arno Quay	Medium	Moderate-Major	Negative

Table E8.1 Summary Table of Effects on Visual Amenity; During Construction

Viewpoint No.	Location Description	Approx distance to development boundary (metres/nearest development)	Range of View	Significance of effects at Year 1 Following Completion.	Type of Effect at Year 1 Following Completion. Adverse/ Neutral/ Beneficial
1	Dock View Road	265m - East Quay	Medium	Major	Beneficial
2	Former Dock Offices	30m -East Quay	Very Short	Minor to Moderate	Beneficial
3	Clive Road, Barry Island	10m - South Quay Waterside	Very Short	Moderate to Major	Beneficial
4	Junction of Harbour Road	235m - West	Short	Major	Beneficial

Viewpoint No.	Location Description	Approx distance to development boundary (metres/nearest development)	Range of View	Significance of effects at Year 1 Following Completion.	Type of Effect at Year 1 Following Completion. Adverse/ Neutral/ Beneficial
	& Broad Street (A4055)	Pond			
5	Ffordd Sealand/ Ffordd y Mileniwm	25m - District Centre	Very Short	Major	Beneficial
6	Footway, nr Gladstone Road Bridge	115m - Arno Quay	Short	Moderate	Neutral
7	Trinity Street	560m - District Centre	Medium	Minor to Moderate	Beneficial
8	College Road	520m - Arno Quay	Medium	Minor – Moderate	Beneficial

Addendum Table E8.3

Summary Table of Effects on Visual Amenity: Year 1 Following Completion

Viewpoint No.	Location Description	Approx distance to development boundary (metres/nearest development)	Range of View	Significance of effects at Year 10 Following Completion.	Type of Effect at Year 10 Following Completion. Adverse/ Neutral/ Beneficial
1	Dock View Road	265m - East Quay	Medium	Major	Beneficial

Viewpoint No.	Location Description	Approx distance to development boundary (metres/nearest development)	Range of View	Significance of effects at Year 10 Following Completion.	Type of Effect at Year 10 Following Completion. Adverse/ Neutral/ Beneficial
2	Former Dock Offices	30m -East Quay	Very Short	Minor-Moderate	Beneficial
3	Clive Road, Barry Island	10m - South Quay Waterside	Very Short	Major	Beneficial
4	Junction of Harbour Road & Broad Street (A4055)	235m - West Pond	Short	Major	Beneficial
5	Ffordd Sealand/ Ffordd y Mileniwm	25m - District Centre	Very Short	Major	Beneficial
6	Footway, nr Gladstone Road Bridge	115m - Arno Quay	Short	Minor	Beneficial
7	Trinity Street	560m - District Centre	Medium	Moderate	Beneficial
8	College Road	520m - Arno Quay	Medium	Moderate-Major	Beneficial

Addendum Table E8.4

Summary Table of Effects on Visual Amenity: Year 10 Following Completion

5.55

The comments made regarding the Landscape and Visual Assessment and the proposed amendments to the development that are outlined in paragraph 1.1 above, will result in no overall changes in terms of impacts on

townscape/landscape character and visual amenity within the study area. Therefore the conclusions made regarding the significance of effects within the Landscape and Visual chapter of the submitted ES (August 2009) will not be effected and are still applicable.

6.0 Ecology

Introduction

- 6.1 This document has been prepared by Soltys Brewster Ecology Ld and provides clarification on a number of points within Chapter F of the submitted Barry Waterfront ES (August 2009), as well as taking into account minor scheme changes that have been made since submission. In addition, responses to the submitted ES have been received from the Countryside Council for Wales (CCW), Environment Agency Wales (EAW) and the ecologist at the Vale of Glamorgan Council. Where appropriate, clarification/response to these comments is included within this addendum – see Consultation Responses.

Policy Context

- 6.2 Since the submission of the Environmental Statement, the revised Technical Advice Note 5 (TAN 5) relating to Nature Conservation & Planning has been published by the Welsh Assembly Government (WAG, September 09). Sections 2.2. and 2.3 of the submitted ES reported the position at the point when the application was submitted and listed several of the key principles listed under the Draft TAN 5.
- 6.3 Within the published TAN 5 (i.e. WAG, September 2009) there have been no changes relating to the key principles identified within the submitted ES. Consequently, the overall assessment on Ecology within the submitted ES would not be affected.
- 6.4 There have been no further relevant changes to legislation or policy since the submission of the planning application.

Assessment Methodology & Significance Criteria

- 6.5 There has been no change to the methodology used to assess the ecological impacts of the scheme.
- 6.6 For clarification, within paragraph 3.2 of the submitted ES, the reference to EclA relates to Ecological Impact Assessment, a term used in the IEEM guidance referred to in section 3.1 of the submitted ES. The reference to JNCC at paragraph 3.8 of the submitted ES chapter relates to the Joint Nature Conservation Committee.
- 6.7 Within paragraph 3.3 of the submitted ES, no reference to the existing site buildings on South Quay or West Pond was indicated. For clarity, replacement paragraph 3.3 is as follows:

'The site itself occupies an area of 43 Ha. (c.106 acres) in Barry Waterfront, comprising unmanaged neutral grassland, ruderal 'Brownfield' vegetation and

dense stands of colonised scrub, which lie over uneven ground, rubble and large areas of concrete. Within the landscape there are a number of indications which imply that the land has a history of large-scale storage and transport. For example, large concrete foundations and areas of gravel aggregate covered much of the land area on south quay and south of west pond with large tracks of access road. Within these parts of the site, a small number of derelict buildings/structures persisted such as the NERC building on South Quay and the Tank Wash south of West Pond. Further descriptions of these buildings and their relevance to the ecology assessment is included in subsequent sections of this ES chapter (for example paragraphs 3.18 & 5.14).'

Consultation Responses

- 6.8 Following submission of the Environmental Statement, responses have been received from the following statutory consultees relating to biodiversity:
- Countryside Council for Wales (CCW);
 - Environment Agency Wales (EAW);
 - Vale of Glamorgan Ecologist.
- 6.9 No objection to the proposed development was raised by either CCW or EAW although both indicated a number of recommendations for consideration by the local planning authority. The Vale of Glamorgan Ecologist objected to the proposed development on the basis of a net loss in biodiversity. None of the consultation responses queried the valuation of ecological features and the subsequent assessment of impacts – accordingly, no changes to the submitted ES text (August 2009) have been undertaken.
- 6.10 Further description and consideration of the consultation responses are set out in the following paragraphs.
- ### **Countryside Council for Wales**
- 6.11 No objection to the scheme was indicated although the response directs the local authority to consider the presence of notable species (e.g. Skylark) and habitats (open mosaic on previously developed land) at the site and the biodiversity duty under the Natural Environment and Rural Communities (NERC) Act 2006. The response indicates that opportunities should be sought for *'the greatest biodiversity gain within the scheme , should permission be granted'*.
- 6.12 With regards to the mitigation measures identified within the submitted ES, no objection was indicated although a number of recommendations were identified including details of species translocation methods (for e.g. Slow Worm and Corky Fruited Water-Dropwort) and management plans for newly created habitats/areas of green space.
- 6.13 The recommendations identified by CCW are a consideration for the development control process and could form the basis of future negotiations

(with the applicants) or be incorporated as conditions within any planning consent.

Vale of Glamorgan (Ecology)

- 6.14 Based on the net loss of biodiversity across the site, the Vale of Glamorgan Ecologist objected to the proposed development. The response indicates that the Vale comments reflect those made by CCW and, despite the objection to the scheme (by the Vale), goes on to identify a very similar list of recommendations such as management plans for mitigation features etc. The Vale response goes on to identify further measures to ensure protection of species such as avoidance of the bird breeding season for vegetation removal, increase in the provision of nest boxes and a method statement relating to the translocation of reptiles and Corky-fruited Water Dropwort.
- 6.15 Avoidance of the bird breeding season for vegetation clearance, and other measures to minimise/mitigate impacts on biodiversity have been incorporated into the mitigation strategy and were included as part of the assessment in the submitted ES (August 2009). The Vale recommendations relating to method statements, management plans etc could be addressed as described in paragraph 6.16 (see below) of this ES addendum.
- 6.16 A specific query raised by the Vale relates to the historic record of Rough Marsh Mallow *Althea hirsuta*, a legally protected plant species in close proximity to East Quay. Verbal confirmation that no evidence of this species was recorded on site was provided to the Vale of Glamorgan Ecologist following submission of the ES.
- 6.17 The record of Rough Marsh Mallow dates from 1991 in an area at the southern edge of East Quay (Grid reference ST 125 675). This corresponds to the area where Childing Pink *Petrorhagia nanteuilii*, another protected plant species, was recorded as part of the survey work to inform the submitted ES – with the colony located outside the planning application boundary. No evidence of Rough Marsh Mallow was noted during these surveys, which were undertaken at an appropriate time of year (summer 2008) by an experienced botanical surveyor.
- 6.18 A formal response to the comments raised by CCW and the Vale of Glamorgan Council has not been compiled although a pre-application meeting with both was held in June 2009 where the emerging masterplan, mitigation proposals and site constraints (e.g. requirement to raise the development to reduce flood risk) were discussed. Subsequent to this meeting, the mitigation proposals were revised to include, for example, brown roofs, brownfield meadows and the retention of existing site features as far as practicable. These proposals were considered appropriate given the site constraints (flood risk etc) and the UDP allocation for housing provision in excess of 1,400 units, which does not make any reference to the requirement for ecological mitigation.

Environment Agency Wales

- 6.19 No objection to the scheme was raised by the EA subject to a number of recommendations being taken into account and implemented via a series of planning conditions. In relation to biodiversity, these recommendations included:
- Creation of aquatic features as part of the mitigation strategy;
 - A landscape management plan for all areas except privately owned gardens;
 - Details of the proposed planting associated with aquatic features which could provide habitat and green linkages for species such as Water Vole and Great Crested Newt.
- 6.20 A formal response to the EA comments has been provided (letter issued via Nathaniel Litchfield & Partners dated 6 January 2010) which sets out that several of the recommendations are considered inappropriate to the existing and future baseline ecological conditions. For example, the only aquatic feature present at the application site, and in the immediately surrounding area, is a small ephemeral pond within part of West Pond. Provision of aquatic features as part of the mitigation strategy would not be as mitigation for features lost to development and would not be representative of the existing site features that have informed the mitigation strategy which includes for retention and creation of habitats appropriate to those currently represented at the site such as brownfield habitat (mitigation would provide a brownfield meadow and brown roofs) and grassland. In addition, a swale and wildflower meadow would be provided within West Pond that would be wet at certain times of the year although would be a 'marginal' rather than 'aquatic' feature.
- 6.21 The suggestion that aquatic features, if provided could support species such as Water Vole and Great Crested Newts has no relevance to the existing (or proposed) site conditions. There are no desk study records of these species within a 1km radius of the site, and no habitat capable of supporting a population (that could colonise the Waterfront site) in the surrounding area comprising Barry and other areas of dockland/railway corridor. Even if aquatic features were provided, there is no mechanism (other than a dedicated introduction programme) whereby these species could colonise the site. As part of the surveys undertaken to advise the ES, no evidence of use by any amphibian species was recorded at the ephemeral pond in West Pond.
- 6.22 The EA comments relating to habitat corridors and use of native plants and berry producing shrubs are noted and have been incorporated in the current masterplan and mitigation strategy.

Baseline Conditions

- 6.23 There has been no change to the ecological baseline conditions described in Section 4 of Chapter F in the submitted ES (August 2009).
- 6.24 For clarity, an additional sentence has been added as the penultimate sentence of section 4.1 such that the revised paragraph is as follows:
- 'The ecological baseline was established by identifying the valued and sensitive ecological resources within the boundary of the development scheme and in adjoining areas by a combination of desk study and field surveys. The desk study consultation via SEWBRc included the 3 km grid squares in which the site is located (ST 10 67, ST 11 67 & ST 12 67) and an adjoining 1 km buffer area. These area parameters were also used as the basis for requesting information on any locally designated sites (candidate Sites of Importance for Nature Conservation or cSINC) from the local authority. The field surveys were largely confined to the habitats within and immediately adjacent to the application boundary.'*
- 6.25 A number of candidate Sites of Importance for Nature Conservation were identified within the specified search area (see above) although none were considered of particular ecological relevance to the proposed development and were not afforded specific consideration in the submitted ES (August 2009).
- 6.26 The Scoping Opinion received from the Vale of Glamorgan (dated 08 February 2008) makes a generic reference to the need to consider protected species such as bats, Great Crested Newts, Badger, reptiles and Barn Owl. With the exception of Barn Owl, surveys for the listed species were undertaken to inform the submitted ES (August 2009). No specific consideration was given to Barn Owl as the bird surveys undertaken to inform the ES did not identify any evidence of use of the site by this species and there are no suitable roosting/nesting sites in close proximity to the site. In addition, no reference to Barn Owl was made in the consultation responses received from either CCW or the Vale of Glamorgan Ecologist.

Potential Impacts

- 6.27 The potential impact section of Chapter F (Section 5.0) of the submitted ES (August 2009) remains valid and the minor scheme amendments do not give rise to any additional ecological impacts during construction and operation. The remainder of this section provides further clarification to the submitted chapter.
- 6.28 Sections 5.9 and 5.10 of the submitted ES indicate that some adverse impact in the short term could affect habitats immediately alongside the development footprint such as the grassland and scrub on the cliff at South Quay and retained grassland at East Quay.

- 6.29 As stated in paragraph 5.4 of the submitted chapter, the assessment of impacts within this section (Section 5 of the ES) is in the absence of any mitigation measures. For the described features, in the absence of mitigation, there is a risk of effects from e.g. storage of construction material, tracking of site vehicles etc. which could lead to an adverse impact. Mitigation measures summarised in Table F2 such as the use of fencing to clearly demarcate off-site areas (e.g. cliff face at South Quay, grassland at East Quay) would reduce the level of impact in some cases – for example the residual impact of the scheme on calcareous grassland on South Quay would be Neutral.
- 6.30 Within section 5.20 of the submitted chapter, a significant adverse effect on terrestrial invertebrates within the application boundary was identified during site clearance and construction (in the absence of mitigation). The overall invertebrate assemblage at the site was considered to be of Local ecological value, with the most important feature the grassland/scrub and cliff base on South Quay – most of the notable invertebrate species were associated with this area and the presence of these species was an important consideration in assigning the Local value. On the basis that no direct impacts to the cliff would occur as part of the scheme (i.e. the area of greatest invertebrate interest would not be directly affected), a significant impact at a Local scale was considered unlikely although at the scale of the application site (which supported relatively few notable species), a significant impact was probable based on the extent of habitat loss. For other features described (e.g. birds, bats, reptiles), impacts have all related to the geographical scale at which the feature was of value.
- 6.31 Paragraph 5.27 of the submitted ES chapter identifies an adverse operational impact on retained terrestrial invertebrate habitat on South Quay during scheme operation in the absence of any mitigation. This could arise due to increased disturbance from human activity in the proposed residential development. Increased recreational pressure would not necessarily apply to this area as it is not identified as Public Open space within the masterplan.

Mitigation Measures

- 6.32 No additional ecological impacts would arise in relation to the minor alterations considered in this ES addendum and accordingly, no additional mitigation measures have been identified.

Residual and Cumulative Effects

- 6.33 There is no change to the overall residual effect of the development as assessed in the submitted ES Chapter (Chapter F). None of the points clarified in this ES addendum require substantial revision of the submitted chapter or a re-assessment of the impacts of the proposed masterplan.
- 6.34 Subsequent to the submission of the ES, the draft TAN 5 on Nature Conservation and Planning was published by WAG (September 2009).

However, none of the key principles described in the submitted ES chapter were changed in the published TAN 5 and as a consequence, no amendment to the submitted ES text is considered necessary.

- 6.35 Consultation responses received from CCW and EAW did not object to the scheme although did identify a number of recommendations relating to the details of mitigation provision should the scheme be granted planning consent. The Vale of Glamorgan Ecologist did raise an objection based on the net loss of biodiversity across the site although the consultation response went on to identify a similar list of recommendations to those identified by CCW.
- 6.36 The ecological mitigation strategy incorporated within the submitted ES chapter was devised based on a pre-application discussion with CCW and the Vale Ecologist and included measures to retain/create habitats and site features appropriate to the existing site conditions and species. Given the development requirements for the site (1,400+ houses identified in the UDP allocation) and the constraints imposed by flood risk prevention (requirement to raise base level of the site), the mitigation strategy proposed is considered appropriate and would retain resources for biodiversity locally, albeit at a reduced scale.

Abbreviations

ECIA – Ecological Impact Assessment

JNCC – Joint Nature Conservation Committee