Galway Harbour Company

Galway Harbour Extension

Environmental Impact Statement

Chapter 12

The Landscape & Visual

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12 LANDSCAPE AND VISUAL

12.1 INTRODUCTION

This section of the EIS provides a landscape and visual impact assessment of the proposed development and was undertaken over the period 2010 to 2013. It is intended to assess the existing environment, examine and evaluate the implications of the proposed scheme in terms of subsequent landscape character and visual alterations to the local environs. For the purposes of the landscape and visual impact assessment, the study area is confined to lands around the proposed site, which includes the entirety of the study area that is the relevant part of the visual envelope for the proposed scheme.

The final assessment consists of:

1. A photographic/mapping study relevant to the landscape and visual impact assessment, to be read in conjunction with this report.
2. A description of the existing landscape to establish baseline conditions.
3. A written statement on the impact of the proposal on the landscape character and values of the area.
4. A description of the visual impact of the proposal on properties and public areas, supplemented by a photomontage package (contained in EIS Volume 2D – Drawings, Visual Plates 1-20).

The objective of the study was to undertake sufficient assessment to identify the landscape and visual factors and likely effects upon the landscape and visual receptors, yielded by the proposal. Landscape and visual mitigation measures have also been assessed, to potentially reduce the level of adverse landscape and visual impact of the scheme.

12.2 METHODOLOGY

The assessment methodology was derived from the following guidelines:

1. Environmental Protection Agency (EPA): Guidelines on the Information to be contained in Environmental Impact Statements (March 2002), and Advice Notes on Current Practise: in the preparation of Environmental Impact Statements (2003).
2. Department of Environment, Heritage and Local Government (DoEHLG)'s, Landscape and Landscape Assessment: Consultation Draft of Guidelines for Planning Authorities (2000) and Appendices to Landscape Guidelines.
3. National Roads Authority (NRA): Environmental Impact Assessment for National Road Schemes – A Practical Guide contained in: Environmental Assessment and Construction Guidelines (2006).
4. Landscape Institute and Institute of Environmental Assessment (LI/IEA): Guidelines for Landscape and Visual Impact Assessment 2nd Ed. (2002).

Terminology used in describing scale, degree and duration of impacts as well as sensitivity and quality were derived from information and definitions given in these publications.

The assessment was undertaken through analysis of up to date maps and photography in conjunction with detailed plans of the proposal and photomontages. A site visit was undertaken during spring of 2010 for the baseline assessment and during spring of 2011 for impact assessment. A further visit was undertaken in 2013 to check and update any changes in the intervening period.

The Galway City Development Plan 2011 – 2017 was also consulted to identify planning context, designated sites and protected views.

The following is a summary and explanation of the most relevant technical definitions and terminology used in the assessment study to assist in understanding the contents of this section of the E.I.S.

- Visual Impact: The degree of change in a visual environment resulting from a development.
- Visual Envelope: Extent of potential visibility to or from a specific area or feature.
- Visual Receptor: An element in the environment which is subject to impacts.
- Visual Intrusion: The impact of a development on a view without blocking the view.
- Visual Obstruction: The impact when a development completely blocks a view.
- Sensitivity: The extent to which a landscape or visual environment can accept change without unacceptable adverse effects.
- Mitigation: Measures designed to avoid, reduce, remedy or compensate for impacts.
- Residual Impact: The degree of environmental change that will occur after the proposed mitigation measures have taken effect.
- "Worst Case": The impacts arising from a development in the case where the most severe potential effects are assessed.

12.3 LANDSCAPE IMPACT ASSESSMENT METHODOLOGY

The methodology to establish the landscape baseline (landscape character, value and sensitivity) was derived from the DoEHLG's guidelines. The landscape was appraised to allow it to be described and classified into landscape character areas, which enabled the categorisation of landscape value and sensitivity. The proposed development was then applied to this baseline and potential impacts recorded. Methodology used to derive landscape impacts was based on GLVIA guidelines.

Landscape character classification i.e. the discernment of the character of the landscape is a process whereby the landscape is organized into different areas, each with distinct, consistent and recognisable attributes based initially on landcover – trees, vegetation, settlement, water, land use etc and landform which results from geological and geomorphological history. Added to this first level of assessment is a second layer of landscape values which can be described as the environmental or cultural benefits including services and functions that are derived from various landscape attributes. These include aesthetic, ecological, historical, socio-cultural, religious and mythological attributes.

The sensitivity of a landscape to development is defined as the measure of its ability to accommodate change or intervention without suffering unacceptable effects to its character or values. This will depend on existing land use, pattern and scale of the landscape, visual enclosure/openness of views and distribution of visual receptors, the scope for mitigation which will be in character with the existing landscape and the value placed on the landscape. Landscapes vary in their capacity to accommodate different forms of development. Sensitivity is likely to vary according to the existing landscape, the nature of the proposed development and the type of change being considered. Sensitivity is not therefore part of the landscape baseline, but is considered during the assessment of effects and is guided by a scale of landscape sensitivity categories (refer to Table 12.3.1) to set out site specific categories.

The character, values and sensitivity of a landscape will be influenced by other indicators such as its quality, integrity, distinctiveness, popularity, rarity, cultural meaning, sense of public ownership and social importance.

In the evaluation of the effects four levels or categories were used from high to low for both negative (adverse) and positive (beneficial) as shown in Table 12.3.1. The scale or magnitude of relative effects is based on the scale or degree of change to the landscape resource, the nature of the effect and its duration.

Landscape Values	
Value	**Typical Criteria**
Exceptional	High importance (or Quality) and rarity No or limited potential for substitution
High	High importance (or Quality) and rarity Limited potential for substitution
Medium	Medium importance (or Quality) and rarity Limited potential for substitution
Low	Low importance (or Quality) and rarity

Table 12.3.1 - Landscape Values

Landscape Sensitivity Categories	
Landscape Sensitivity	**Acceptability to Development**
Low Sensitivity	All development kinds
Moderate Sensitivity	Many development kinds
High Sensitivity	Few development kinds
Special Sensitivity	Acceptable only in accordance with designation recommendations
Unique Sensitivity	Negligible alteration

Table 12.3.2 - Landscape Sensitivity Categories

Levels or Grades used in the Evaluation of Effects	
Adverse	**Beneficial**
High / Substantial	High / Substantial
Medium / Moderate	Medium / Moderate
Low / Slight	Low / Slight
No Change	No Change

Table 12.3.3 - Levels or Grades used in the Evaluation of Effects

12.4 VISUAL IMPACT ASSESSMENT

Visual impact relates to the changes that arise in the composition of available views as a result of changes in the landscape, to people's response to the changes and to the overall impact with respect to visual amenity of the visual receptors. With the aid of maps, aerial photography and a field study, a manual estimation of visibility of the site and the proposed development from surrounding lands was established. (See drawing 07-0110 of the architectural drawings section Vol. 2D).

By this method and site visitation, visual receptors were also identified. However, no estimate of the numbers of individual visual receptors have been identified as this is impractical, due to the

large amount of visual receptors throughout the whole study area and the large amount of visual receptors within the urban setting of Galway. Therefore, the visual receptors have been identified as groups.

The methodology of assessing sensitivity of the visual receptor is derived from the LI/IEA guidelines. The sensitivity of the visual receptor is dependent upon site specific characteristics. These include:

- The location and context of the viewpoint in relation to the development.
- The expectations and occupation or activity of the receptor.
- Importance of the view.

The most sensitive receptors include:

- Users of all outdoor recreational facilities.
- Communities where the development results in changes in the landscape setting or valued views enjoyed by the community.
- Occupiers of residential properties with views affected by the development.

In assessing visual sensitivity, more weight is given to changes in the view or visual amenity, which are greater in scale and visible over a wide area. For the assessment the degrees of visual sensitivity were informed by table 12.3.3.

In the evaluation of the impact on views and the visual amenity of the identified receptors the magnitude or scale of visual change was guided by:

- The scale of change in the view with respect to the loss or addition of features in the view and changes to its composition.
- The degree of contrast or integration of any new features or changes in the landscape with the existing or remaining landscape elements.
- The duration and nature of the impact.
- The angle of view in relation to the main activity of the receptor.
- The distance of the viewpoint from the proposed development.
- The extent of the area over which the changes will be visible.

The two principal criteria determining significance of impact are the scale or magnitude of effect and the environmental sensitivity of the location or receptor.

In establishing a judgement concerning significant of visual impacts the following general guidance was used:

- Large scale changes which introduced new, discordant or intrusive elements into the view are likely to be more significant.
- Changes in views from recognised and important viewpoints or amenity routes are likely to be more significant than changes effecting other less important paths and routes.
- Changes effecting large numbers of people are generally more significant than changes affecting a relatively small group of users.

The key features of the development that will affect the visual impact are listed in Section 12.12 Characteristics of the Development.

The assessment of day and night-time visual impact compares the quality of the scene, which would pertain without the scheme, with that which would result if the scheme were constructed and the subsequent degree of change. The terminology in Tables 12.5.1 and 12.5.2 has been used to describe the impact.

A set of day time photomontages have been produced from 16 viewpoints. In addition, a set of night-time photomontages from four viewpoints have been produced. The overall photographic and photomontage package was produced by RealSim Ltd in consultation with this author and was done in accordance with GLVIA 2002 Guidelines (in particular Appendix 9). Full details of the approach and method in preparing the photographic/photomontage package are included in the appendix.

The following are considerations given to the photomontages:

- 16 daytime photomontage viewpoints were chosen to visualize the landscape and the visual impact of the development. The typical representative viewpoints were chosen such, to produce an overall visualization of the development in the landscape. Therefore viewpoints range from amenity and residential areas and from various distances from the development and at various heights in the landscape.

- 4 night-time photomontage viewpoints were chosen from viewpoints representing the key impacted areas at night-time. The key impacted areas were identified as those typically closest to the proposed development and/or areas that were visually in full view of the proposed. The chosen viewpoints also tended to be the ”worst case” in terms of impact on the night time views of the proposed development.

- A number of scenarios are indicated in the photomontage package to reflect the variable nature of a working harbour i.e. inclusion and exclusion of a cruise ship, cargo ship, containers and crane. A worst case scenario was taken in the case of the views most impacted.

- The ships shown in the photomontages are approximately equivalent to the largest passenger and cargo vessels projected to visit Galway.

- Mitigation measures in terms of colours of the buildings have been taken in account, as these mitigation measures are permanent.

- Mitigation measures in terms of landscaping have not been taken in account to reflect a worst-case impact where vegetation fails to grow. However, additional photomontage images are provided to show the visual impact of the landscaping mitigation measures proposed on site and likewise the mitigation which will arise with the relocation of cargo vessels and tonnage from the existing Port.

Sensitivity of Visual Receptors	
Value	**Typical Criteria**
Exceptional	Visual receptors with views of exceptional quality and importance renowned and popular with the general public including locals and tourists
High	Visual receptors with views of high quality and importance enjoyed and valued by the community
Medium	Visual receptors with views of medium quality and importance and/or enjoyed by a more confined group of users
Low	Visual receptors with views of little merit or value

Table 12.4.1 - Sensitivity of Visual Receptors

12.5 TERMINOLOGY/DEFINITIONS

The terminology in Tables 12.5.1, 12.5.2 and 12.5.3 is used to describe the impacts.

Degree of Visual Impact	
Degree of Impact	**Description of Impact**
No Impact	There is no change to views in the visual landscape.
Imperceptible	The proposal is adequately screened due to the existing landform, vegetation or constructed features.
Slight Impact	The affected views form only a small element in the overall visual composition, or change the view in a marginal manner.
Moderate Impact	The proposal affects an appreciable segment of the overall visual composition, or there is an intrusion in the foreground of a view.
Significant Impact	The proposal affects a significant impact of the overall visual composition, or views are so affected that they form a new element in the physical landscape.
Profound Impact	The view is entirely altered, obscured or affected.

Table 12.5.1 - Degree of Visual Impact

Scales of Impact	
Scale of Change	**Description of Change**
Negative	A change that reduces the quality of environment
Neutral	A change which does not affect the quality of the environment
Positive	A change which improves the quality of the environment

Table 12.5.2 - Scales of Impact

Duration of Impact	
Degree of Duration of Impact	**Description of Duration of Impact**
Temporary Impact	Impact lasting for one year of less
Short-term Impact	Impact lasting one to seven years
Medium-term Impact	Impact lasting seven to thirteen years
Long-term Impact	Impact lasting fifteen to sixty years
Permanent Impact	Impact lasting over sixty years

Table 12.5.3 - Duration of Impact

12.6 RECEIVING ENVIRONMENT

A combination of desktop study, site survey, photographic study and local knowledge was used to establish baseline conditions as an outline of the receiving environment in the study area. The baseline study assisted in classifying and evaluating the existing landscape and visual amenity and resources, focusing on its sensitivity and ability to accommodate change.

The proposed development site is currently open water, immediately south of the Galway Harbour Enterprise Park and general Galway Harbour Area where it is proposed to create a reclaimed man made peninsula. This area is generally maritime and industrial in character. It is adjacent to the railway embankment to the north and in close proximity to Galway City Centre to the North West. The general area is defined by water, forming part of the seashore of Galway Bay and adjacent to the mouth of the River Corrib, Lough Atalia channel and existing harbour Dock basin. The nearest land boundaries to the west consist of South Park and to the east, Roscam beach and Renmore Barrack lands. The site is located in a relatively open landscape and seascape forming part of the general foreshore edge to the city. Its open nature is characterised by its extensive coastal sea element and the expanse of green space to both sides of the site extending from Mutton Island causeway to the west and the railway line to the east with the built structure of the city centre to its north. Features of the visual composition around the proposed site is the established significant industrial block element of the existing Enterprise Park and the general absence of vegetation cover in the coastal western environs in contrast to the existence of vegetation cover in the coastal eastern environs.

The existing contours of the Enterprise Park are largely flat and generally at 4.0 metres (Malin datum). The even level nature of the park is generally consistent with the coastal and waterfront land edge extending from Salthill to the west through the city centre and extending to Ballyloughan to the east. The city centre is relatively flat, gently rising to a high point of circa 20.0m at Prospect Hill. The western and eastern environs of the city is characterised by an undulating landform, gradually rising to a high point of circa 50.0m at Letteragh to the west and circa 45.0m at Ballybane to the east. The higher ridges of the undulations provide only limited elevated views to the site from both the western and eastern environs due to the intervening landform, built structures and vegetation.

12.7 PLANNING CONTEXT AND DESIGNATIONS

The site is located in both national and international designated conservation areas.

1. Galway Bay Complex cSAC.
2. Inner Galway Bay SPA.
3. Designated pNHA.

The Galway City Development Plan 2011 – 2017, contains stated objectives in regard to views of Special Amenity Value and Interest.

Policy 4.8 – Protected Views of Special Amenity Value and Interest.

- Protect views and prospects of special amenity value and interest which contribute significantly to the visual amenity and character of the city through the control of inappropriate development.

- Require landscaping schemes as part of planning applications to have regard to such views and limit any planting which would have a detrimental impact on the value of protected views.

The protected views within the city are classified into two types, panoramic views and linear views. The former allows expansive views over landscape while the latter are views towards a

particular landscape, observed from a particular roadway. The objectives also note that some changes to a view can be absorbed without jeopardizing the intensity of the view, while other changes can have detrimental impacts on a view, which reduce the experience of that view irreparably.

There are no protected views within the site but there are protected views from lands to the east and west of the site. The following are the relevant protected views within the study area as recorded in the City Development Plan (Table 4.7).

Panoramic View Examples:

V.1 Panoramic views of the city at the River Corrib from Circular Rd.
V.2 Seascape views of Galway Bay from Grattan Road, Seapoint, the Salthill promenade and the coast road to the western boundary of the golf course.
V.6 Views towards the sea at Roscam.

Linear View Examples:

V.15 Seascape views of Galway Bay at Ballyloughan from south of the railway bridge.
V.14 Views towards Galway Bay from Hawthorn Drive, Renmore.
V.12 Seascape views from Military Walk, Renmore.

See Plate 0 showing Study View Points.

12.8 LANDSCAPE CHARACTER

The proposal is located on a reclaimed peninsula adjacent to the existing harbour, close to the existing city centre and which is currently open water. The area is generally maritime and industrial in character. The site is the transition point between the manmade coastal edge of the city and western environs extending to Salthill and the natural foreshore of the eastern environs extending to Roscam. The landscape is a landscape of mixed uses ranging from urban, residential, amenity, industrial to agricultural. The landform is also diverse ranging from flat and undulating lands, sea, islands and causeways. Six different landscape character areas were identified based on an appraisal of unique characteristics that allows landscapes to be classified into categories and in particular determined by landcover, landform and landscape values and subsequently landscape sensitivity. (See drawings 08 of the architectural drawings section in the appendix)

12.8.1 Harbour Industrial and Maritime Landscape

This landscape character area is confined to the flat, low lying concentration of Galway harbour and its associated industrial sites. Consisting of an industrial settlement pattern both built and open its landscape value is mainly economic because of its industrial nature. However, the existing harbour basin and associated protected structures provide a cultural value to the landscape. This landscape character is moderately sensitive to change.

12.8.2 Urban Waterfront Landscape

The coastal townscape edge extending from the Claddagh to Salthill including Nimmo's Pier is a flat, low lying stretch of public amenity in the form of parks, beach and walking trails most of which are manmade or reformed elements. It has a mix of planer grass, paved, road and parking areas with minimal overground vegetation. It has a high scenic value due to its location fronting the harbour and bay, and forms a well known and well used, panoramic scenic route. Because of its adjacency to Galway Bay which is an important cultural brand, it has a high landscape value. This landscape character area is highly sensitive to change.

12.8.3 Undulating Coastal and Island Landscape

This landscape character area is confined to the eastern environs of the site between the seashore and the railway line, consisting of mainly natural foreshore ranging from salt marsh to stoney, sandy or muddy sand shore, more cultivated at the higher levels for recreational, institutional and residential use of both dispersed and small clusters of social habitation. Vegetation varies from seaside marsh scrub to lines or groupings of both conifer and broadleaf trees. The landscape has a recreational and amenity value ranging from medium to high and is moderately sensitive to change.

12.8.4 Urban Settlement Landscape

This landscape character area is formed by the urban settlement of Galway City ranging from the dense, mixed urban areas of the city centre and Salthill to the lower density and primarily residential areas east and west of both centres. The landform is generally flat, close to the coastal edge and gradually rises in an undulating pattern inland. The landscape has a high cultural value, particularly in and around the main, urban, historic centre. Overall the landscape is moderately sensitive to change.

12.8.5 Undulating Patchwork Landscape

The rural pastoral patchwork landscape towards Roscam and Rinville forms part of the seaward backdrop for the proposed site. This landscape character area consists of dispersed rural housing settlements in a gently undulating landscape with a patchwork field pattern ranging from marginal grazing to fertile pasture land, enclosed by mixed hedgerows and occasional concentration of broadleaf trees. The landscape has a medium landscape value and is moderately sensitive to change.

12.8.6 Rolling Hill Landscape

The bare karastic limestone hills of Clare form the second part of the seaward backdrop to the proposed site. This landscape character consists of a highly undulating pattern of hills with a fissured limestone cover and generally devoid of vegetation except at the lower slopes. This landscape has a unique landscape value because of its rarity and designation. The landscape is highly sensitive to change and can only accommodate negligible alterations.

12.9 VISUAL ENVIRONMENT

The three main components of the visual environment are visibility, visual receptors and the landscape that is viewed by the receptor. Visibility is defined by the landform and landscape attributes (such as buildings, hedgerows, trees, walls, etc) and can be determined by a manual visibility study. Visual receptors are those that experience the landscape. The landscape which is viewed by the visual receptors within the study area has been discussed in section 12.8.

Visual Envelope and Study Area

The proposed site was studied for potential visibility within the local environs. The purpose of this analysis was to develop a precise study area, as outlined in drawing 06 in the architectural drawing section of the appendix, with regard to potential visual impacts, which may occur as a result of the proposed development. The study involved identifying the following:

- Views from public amenity locations.
- Views from scenic areas and routes.
- Views from residential dwellings.
- Views from local roads.

The visibility of the proposed harbour extension development at Galway is determined by the contours of the land, existing vegetation, buildings and other elevated elements within the landscape. The location of the site on low terrain at the coastal edge against the backdrop of a landscape that gently elevates inland makes the site visible from various viewpoints around the site. The contours of the land and the location of the site at the harbour's edge allow a wide visual envelope to the west and east, but limited to the north.

The Manual Visibility Study which was a combination of a field survey and topographical maps as distinct from a computer modelled visibility map, indicatively outlined the areas of land from which there was a potential view of any part of the proposed works and from which there was only a potential view of the tallest elements and also showed the areas from where the development was not visible at all. The degree of intrusion on the existing visual environment, created by the proposed development is dependent upon a variety of factors including terrain, vegetation cover and structures that screen views to the development. By examining the visual envelope, the potential extent of visibility is isolated and potential visual receptors that may be affected can be itemised.

The various potential receptors of visual effects include amenity users, residents, visitors, motorists/water traffic and local employees. The key potential sensitive visual receptors highlighted by baseline information are those listed in Table 12.9.1.

The sensitivity has been defined using the methodology outlined in section 12.7. The sensitivity of visual receptors is dependent upon site specific characteristics: their location and context, expectations and occupation, and importance of the view.

The significance of visual impacts on the perceived environment will depend on the ability of the existing environment to absorb the proposed changes, also partly on the intensity of use of any view and the people affected, but also on value judgement about how much the changes will matter.

In order to assist in description and comparison of the effects on views, the following categories are used when necessary to describe the change in character of the available views and the change in visual amenity of the visual receptor.

1. The extent of the view that would be occupied by the development (degree of visual intrusion) full, partial, glimpse etc.
2. The proportion of the development or particular features that would be visible: full, most, small amount, none.
3. The distance of the viewpoint from the development and whether the viewpoint would focus on the development due to proximity or the development would form one element in a panoramic view.
4. Whether the view is transient or one of a sequence of views, as from a moving vehicle or footpath.

The significance of change to existing views is guided by the following:

1. Large scale changes which introduce new, discordant or intrusive elements into the view are more likely to be significant than small changes or changes involving features already present within the view.
2. Changes in views from recognized and important viewpoints or amenity routes are likely to be more significant than changes affecting other less important paths and roads.
3. Changes affecting large numbers of people are generally more significant that those affecting a relatively small groups of users.

Potential Key Visual Receptors Identified			
Amenity Users	**Residential**	**Travelling Receptors**	**Visitors/Non-residents**
Salthill Promenade and associated beaches Exceptional sensitivity	Residents of Claddagh area High sensitivity	Motorist on Salthill scenic route High sensitivity	Hotel residents in the City Centre/ Salthill area Medium sensitivity
Renmore including Mellows Park High sensitivity	Residents of city centre area Medium sensitivity	Motorist on Circular Road scenic route High sensitivity	Employees of local industrial, commercial, institutional and community components in the study area Low sensitivity
Recreational grounds at South Park High sensitivity	Residents of Ballyloughan/ Roscam Medium sensitivity	Local road users within study area Medium sensitivity	
Boating activities, Galway and Rinville sailing clubs, Ferry users High sensitivity	Residents of Salthill area High sensitivity	Railway line users Low sensitivity	
Participants and visitors to national or international events such as the Volvo Ocean Race High sensitivity	Residents of Renmore/ Murrough/Roscam (incl. Mellows Park) Medium sensitivity		
Coastal walking trail from Salthill to Galway City Centre High sensitivity			
Golf course at Salthill, Pitch and putt course at Renmore barracks; Liam Mellows sports grounds, Renmore. Medium sensitivity			

Table 12.9.1 - Potential Key Sensitive Visual Receptors Identified.

12.10 CHARACTERISTICS OF THE DEVELOPMENT

The proposed harbour extension development consists of 24 hectares of land reclamation. The various elements comprising the overall development have already been outlined in Section 3 of Chapter 4 [i.e. 4.3] of the E.I.S. For the purposes of assessing visual impact, two core component features are regarded as critical.

1. Infrastructural Component: The fixed, permanent built elements of the proposed port consisting of the reclaimed lands, buildings, quays, piers, access routes, rail link, fencing, lighting and landscaping. The works to Lough Atalia Bridge is included separately under Material Assets (Cultural assets of a physical kind) because of the small scale, localised nature of works to a protected structure, which is removed from the main development. The proposed sculpture as included in the landscaping plan is not indicated because it is subject to a separate future design, planning application and assessment.

2. The Operational Component: The variable, temporary and moveable element of the development consisting of the more visible items such as ships, cargo and mobile cranes to the less visible items such as fishing vessels, boats, pleasure and sailing craft, trucks, freight train and cars. Only mobile cranes will be used in the proposed development and normally will be retracted to their down position when not in use.

In order to fully assess the visual impact of the proposed development, both components are included in the assessment process while given a more accurate impact of the combined infrastructural and working harbour on the receiving visual environment.

Because of the variable and temporary nature of the vessels, plant and cargo elements, we have included the following operational elements in the proposed development as representing anticipated, expected or typical elements based on the experience of the existing harbour and projected changes based on the new port's increased capacity.

1. Cargo containers stacked two containers high (maximum 5 metres).
2. One mobile crane with a maximum height of 22m.
3. Option of a 30,000 tonne cruise ship, 180 metres long x 40 metres high.
   Option of a 20,000 tonne tanker vessel, 120 metres long x 17 metres high.
   Option of a 20,000 tonne cargo vessel, 108 metres x 20 metres high.

12.11 LANDSCAPE IMPACT

As the study area encompasses a range of landscape character types discussed in section 12.10, each with varying sensitivities, the impact on the existing landscape within which the proposal is located, will vary. For example, due to the fact that maritime industry and industrialised land use is already present on and adjacent to the proposed development location, the impact yielded by the proposal on that particular landscape character area, will likely be considered neutral. However, as the proposal will include the permanent reclamation of what is currently considered part of the general harbour character, this will reduce the surface area of open water in the view frame and permanently change the coastline in that area. This will shift that particular character type to one of industry/port and may therefore yield a negative impact on such components of the site/study area. Only one of the landscape character areas connect directly to the proposed development. The remainder are separated from the proposal by sea element, in some cases, well removed from the proposed development. Predicted impacts are outlined in Table 12.11.1.

Predicted Landscape Impact				
Landscape Character Areas	**Landscape Value**	**Degree of Sensitivity**	**Degree and Scale of Impact**	**Description of Impact**
Harbour industrial and maritime landscape	Medium	Moderate	Permanent slightly negative impact	As the only landscape area that is physically connected to the proposal, there is a more immediate and direct impact. The existing area has a more industrial/maritime nature and in particular is more industrial at the area where it links to the proposed development i.e. the existing Enterprise Park. Whilst the nature of the development is less industrial than the existing Enterprise Park, it is larger in scale and protrudes significantly further into the seascape, which will substantially increase the scale of the existing harbour industrial maritime landscape. Overall the proposal will have a slightly negative impact on the industrial landscape.
Urban waterfront landscape	High	High	Permanent moderately to significantly negative impact	While this landscape is separated from the proposed development by an element of sea water, it has general proximity to it. The proposed port development is of a much larger scale and physical proportions to that which currently exists on the site. Due to its central location within the harbour it will add visible port structures to the landscape, which will impact on the existing setting. The size and scale of the development will increase the industrial port perception and the loss of sea element will impact on the maritime setting of the landscape which is alleviated to some extent by the provision of the recreation of the western marina. Overall the proposal will have a moderate to significant negative impact on the urban water landscape.
Undulating coastal and island landscape	Medium	Moderate	Permanent slightly negative impact	While this landscape is separated from the proposal by an extensive body of sea water, the sea element which is the location of the proposed development forms part of the general recreational and amenity nature of this landscape. The existing harbour and Enterprise Park is also part of the consciousness of this landscape. However, the reclamation of the sea element and the extension of the existing port and port facilities will increase the industrial character and decrease the recreational nature of this landscape. The effect is reduced somewhat by the intervening separation of sea water. Overall the proposal will have a slightly negative impact on the undulating coastal and island landscape.

Table 12.11.1 - Predicted Landscape Impact

Predicted Landscape Impact				
Landscape Character Areas	**Landscape Value**	**Degree of Sensitivity**	**Degree and Scale of Impact**	**Description of Impact**
Urban settlement landscape	Medium	Moderate	Permanent slightly negative impact	The general urban settlement landscape is both distinct and somewhat removed from the proposal except at its coastal and riverfront sea edges. The higher cultural value of its historical centre is also linked to its traditional port setting and the central role of the harbour in its history. The proposed harbour extension is more removed from its historic city centre setting, has an open and exposed nature as distinct to enclosed and sheltered nature in the existing harbour and is of a larger scale in comparison to the more intimate existing port. The new port is not apparent from the majority of the existing urban settlement. Overall the proposal will have a slightly negative impact on the urban settlement landscape.
Undulating patchwork landscape	Medium	Moderate	Neutral	The proposal will not have an impact because of its remove from the undulating patchwork landscape.
Rolling hill landscape	Exceptional	Unique	Neutral	The proposal will not have an impact because of its remove from the rolling hill landscape.

Table 12.11.2 - Predicted Landscape Impact

12.12 GENERAL VISUAL IMPACT DESCRIPTION

For visual receptors with a potential view of the proposed harbour extension development, the degree of impact will be dependent on a range of factors including the distance between the observer and the proposal, the nature and character of the existing view and the degree of visibility or obstruction to the view. In general there are three predominant locations of visual receptors to the proposed harbour extension development – the city centre and the western and eastern environs. The existing nature of the sites environment is both maritime and industrial. The existing Harbour and associated Enterprise Park is the predominant element in its industrial nature, containing oil depots and warehousing and including many port related industrial premises of significant scale. The existing harbour dock area containing shipping, fishing and sailing vessels and the general movement of all craft entering and departing the harbour is the major contribution to its maritime quality. However the general inner bay and greater bay waters has a significant visual and amenity quality which contrasts with the more localized maritime/industrial character of the existing harbour and Enterprise Park. In general, the greater the viewing distances from the proposed port, the greater the character of the amenity value of the bay, but the lesser the visual impact of the development is evident. Conversely, the nearer the viewing distance to the proposed harbour extension, the greater the maritime/industrial character and the visual impact of the development is evident.

The new harbour extension is industrial and maritime in nature. Its industrial element is not however, a replicating extension of the industrial character of the Enterprise Park. The new harbour extension contains open rather than enclosed storage and the built structures are more commercial rather than industrial in character.

However, the presence of plant and machinery combined with its central open cargo storage element still gives it an industrial quality. Its maritime element consisting of the marina, fishing and nautical piers and the commercial berthing quay are evident on its western and eastern edges. Overall, the combined industrial/maritime elements, gives it a distinctive “Portscape” quality similar to the existing harbour. The greatest change to the visual environment and the greatest visual impact is the scale of the reclaimed built development, and the relocation of the portscape from a currently semi-enclosed and semi-hidden inner harbour and its introduction into the more open, exposed and visible environment of the inner bay waters.

Despite the topography of the city, where the city centre, but in particular the eastern and western environs gently rises from their coastal edge, views to the proposed development are either intruded on or obstructed by the intervening landform, buildings, vegetation or other visual barriers. In the city centre, the only available views are from the existing harbour and the Long Walk due to the built urban form obstructing the views from the more elevated areas around Prospect Hill. The exceptions to this are the views from the upper levels of a sequence of medium rise apartments, hotels and commercial buildings that extend from Lough Atalia Rd through the city centre to Wolfe Tone Bridge.

In the western environs views from the elevated areas, are obstructed by vegetation or the medium rise built environment of Salthill and the western inner city area.

At the coastal edge the Mutton Island causeway provides a physical barrier to unobstructed views from the general Salthill area with the exception of medium rise apartments, hotels and commercial buildings.

In the eastern environs, the railway embankment and adjoining vegetation provides a visual barrier to unobstructed views from the rising slope of the Renmore and Murrough areas.

In general, in the higher elevated panoramic view of the bay, where the harbour extension is visible, the proposed development becomes just an element in the view due to the distance and the wide panorama.

Consequently the primary unobstructed views to the harbour extension are from its immediate environs between the railway embankment to the east, Mutton Island causeway to the west and the city centre waterfront edge extending from Wolfe Tone Bridge to the existing harbour areas. It is this area that impacted views are of most concern and interest despite the study area extending from Seaweed Point to the west, Circular Rd to the north and Roscam to the east.

The proposed development site is not immediately adjacent to any residential areas and an expanse of water or land exists between the proposal and affected residential areas and significant view points. Such factors limit the number of visual receptors which normally have direct lines of sight from the properties or amenity areas, obstructed or heavily intruded upon, by large scale developments such as the proposed harbour extension development.

Another consideration that was taken into account when assessing the visual impact of the proposed development is that Galway is very much a city defined by water and the proposal is located on open landscape and seascape, where there is an endless variety of views and prospects in its general foreshore area. Some of these views are of an exceptional scenic quality, such as Salthill, others are of a lesser quality, such as the proposed site. Consequently, the quantity, variety and hierarchy of views available in the city coastal area means that the views around the location of the proposed harbour extension site are relegated to lesser views, where in another context of being the only views available, may have taken on a greater importance.

12.13 SPECIFIC VISUAL IMPACT DESCRIPTION

Table 12.14.1 describes the visual effects of the development and the predicted degree of impact upon specific visual receptors. All impacts identified will be permanent in nature. Impacts caused by moving vessels which are docked, are considered permanent as generally at least one ship will be docked at any one time. Distances given in these tables are measured from the visual receptor to the nearest boundary point of the port development. The specific visual receptors were chosen as typical representative examples of receptors with visibility to the proposal and include in all cases those of protected views which also have visibility of the proposed development.

12.14 LIMITATIONS OF VISUAL IMPACT ASSESSMENT

The purpose of Visual Impact Assessment is to assess the existing visual environment and predict the visual impact of a proposed development on that environment. The existing and impacted visual landscape is demonstrated with the aid of photographs and photomontages showing before and after views of the proposal. While the photographic and photomontage package was produced in accordance with best practice and in compliance with GLVIA guidelines as outlined in the methodology, it is a visual aid only and it is necessary to be aware of the limitations of this approach to visual assessment.

1. Photographs and photomontages are still images focused on a particular subject matter. The camera cannot replicate the complexity of human eyes which have a wider viewing angle with peripheral vision and which are constantly scanning both horizontally and vertically and rarely stay focused on a particular subject.

2. Recorded images are generally unable to show the complete context of the full visual picture frames as seen by the human eye, which can overemphasise the importance of the particular subject in the view frame.

3. Recorded images are static and unable to demonstrate change, variety or movement. This is particularly important in the context of port development where the visual composition is constantly changing due to the variable nature of port activities.

4. Recorded images cannot convey the sense of a particular view i.e. the sensual, cultural and spiritual elements that evoke a particular response. As an example relevant to the port proposal, the superimposed image of a cruise ship which, in a photomontage can appear as a large intrusion in the visual composition, but in reality is often a significant transient attraction in an urban waterfront.

5. Images requiring multiple splicing of standard 50mm focal length shots i.e. panorama's, but particularly, close up views of wide scale subject matters, which is outside the peripheral vision of the human eye, can lead to a distorted perception relative to other non-spliced images. It is important to be mindful of the relative distance and angle between viewer and subject matter when comparing such images. Accurately comparing different viewpoints require the image heights to be equal.

6. While we aim for objective description and assessment in studying visual impact, ultimately personal value judgements have to be made particularly in regard to sensitivity of receptors, the scale of change and the degree of visual impact. Despite the provision of photographs and photomontage images, their interpretation is still subject to subjective perceptions.

Predicted Visual Impact							
Visual Receptor	**Category**	**Description of Receptor**	**Min & max. Distance to Proposal**	**Sensitivity of Receptor**	**Scale of Change**	**Degree of Visual Impact**	**Description of Impact**
1.0 Salthill Promenade from Blackrock to Mutton Island Causeway (see Plate 2)	Public Amenity	A highly popular and well known recreational area with a much used, traditional leisure walk in the holiday resort suburb of Salthill. The promenade has clear, highly scenic, panoramic views of Galway Bay and the Clare Hills. The location of the new port lies in the peripheral vision of the protected views across the bay. However as one travels east on the promenade walk, the proposed site comes into more focus.	0.9km to 3.3km	Exceptional	Neutral	Slight	The proposal will be mainly hidden by the Mutton Island causeway but still visible above the line of the causeway. The main extent of the proposed reclamation will be obscured but the higher elements of the harbour extension buildings, ships, cranes will be visible. The port location will be established for the first time in the view frame but due to the distance to the proposal, its outline rather than its detail will be apparent. Because the view to the harbour extension only occupies a peripheral section of the overall panoramic view of the bay area, the visible part of the proposed site will only be an element in the view and not a central focus.
2.0 South Park area including coastal trail from and including Mutton Island causeway to Claddagh Quay including Nimmo's Pier (see Plates 3, 4, 6)	Public Amenity	A well used daytime seafront recreational green area surrounded on its coastal edge by a popular waterfront walking trail from Mutton Island to Claddagh Quay. The area has direct, continuous and unobstructed views to the proposed new port. The existing views include the industrial Enterprise Park and surrounding seascape with the relatively flat landscape of Roscam and Rinville in the backdrop.	150m to 950m	High	Negative	Moderate (Mutton Island) to Significant (Nimmo's Pier)	The full extent of the proposal will be fully visible, consisting of a narrow horizontal intrusion into the view. It occupies the fore to medium ground in the view frame and will block the view to the backdrop of Renmore to Rinville. The close proximity to the proposal from the nearest viewpoint, makes its detail obvious and the overall development a focal point in the view. The hard nature of the proposed port reflects the existing Enterprise Park but is in contrast to the existing seascape and predominantly green backdrop. The intervening body of waters and the western Marina provide a maritime context and contrast to the port cargo, plant and machinery but only partly screens or filters the scale of the proposal in the view frame.

Table 12.14.1 - Predicted Visual Impact

Predicted Visual Impact							
Visual Receptor	Category	Description of Receptor	Min & max. Distance to Proposal	Sensitivity of Receptor	Scale of Change	Degree of Visual Impact	Description of Impact
3.0 Ballyloughan Strand and adjoining amenity park (see Plate 15)	Public Amenity	The strand and adjoining seafront park area is used predominately by the local community, serving the immediate environs of Renmore and Murrough. The area has clear, direct views to the new port development. The existing views include the general seascape, the existing Enterprise Park in the medium ground with the relatively horizontal outline of the city and Mutton Island causeway as a backdrop.	1.2km to 1.6km	Medium	Negative	Slight	The full scale of the proposal will be visible and is a narrow linear intrusion into the existing view. It occupies the medium ground in the view frame and will obstruct the view to Mutton Island and the western side of the city outline. The proposal will make a less intrusive and less vertical extension of the Enterprise Park, but the commercial port will introduce a new element in the visual composition. The hard nature of the proposal is consistent with the background of the city outline. The foreground and close range view of the seascape remains unchanged but it intrudes on the view of the medium ground seascape. Due to the distance to the proposal and the open nature of the seascape, the proposal is a relatively minor element in the overall panorama.
4.0 Long Walk Area (see Plate 8)	Public Amenity	This consists of a grouping of smaller, incidental areas in the general Long Walk area which are popular gathering places during the tourist season. They include the old Mud Dock area, the Canal bank at Claddagh Quay and the portion of the Fishmarket area adjacent to the Spanish Arch. They all have restricted views towards the proposed site due to Nimmo's Pier and South Park.	420m to 900m	High	Negative	Moderate	The proposal is visible from the Old Mud Dock and Canal bank and partially visible from the Spanish Arch area. Nimmo's Pier and South Park partially obstructs the visibility of the proposal in all three views. The upper element of the proposal, including sailing masts, cargo, ships and buildings will be visible above the line of the pier. The harbour extension will block the narrow view aperture to the outer bay area and Hare Island from the Mud Dock. For the other two areas, it brings the new elements of the port infrastructure and operations into the visual landscape. The new marina will provide a nautical context to the view consistent with the existing Claddagh Quay area, but does not screen the extent of the proposal.

Table 12.14.1 contd/. Predicted Visual Impact

Predicted Visual Impact							
Visual Receptor	**Category**	**Description of Receptor**	**Min & max. Distance to Proposal**	**Sensitivity of Receptor**	**Scale of Change**	**Degree of Visual Impact**	**Description of Impact**
5.0 Claddagh (see Plate 5)	Residential	An inner city residential area located low in the landscape with views to the proposed site mainly from the coastal fronted houses. The existing views consist primarily of foreground views across the South Park recreational area with a relatively even horizontal backdrop in the distant landscape. There are little or limited views to the proposed site seascape from most of the ground floors of the houses.	0.65km to 1.0km	High	Negative	Slight	The proposal is visible over the South Park landform in the midground of the view frame. The lower elements of the harbour extension are obstructed by the topographical nature of South Park where it rises at its foreshore edge. The proposal intrudes into the view beyond the green foreground and screens the view to the distant landscape. The upper elements of the harbour extension break the skyline, but do not intrude into the predominant focus of the view which is South Park.
6.0 Salthill	Residential	The residential and resort suburb of Salthill is located low in the landscape. Views to the proposed site are mainly from the sea fronted buildings consisting of a mixture of houses and medium rise apartment buildings and primarily from those located between Whitestrand Road and Seapoint. Because of the visual barrier created by the Mutton Island causeway, the visibility to the new port is mainly from the upper level apartment units.	2.1km to 2.6km	High	Negative	Slight	The proposal is visible from the upper level apartment units with a partial visibility from lower level units and houses. Due to the distance to the harbour extension and the wide panoramic view of the bay, the proposed is just an element in the overall visual composition. The general industrial nature of that existing section of the panoramic view means that the harbour extension forms an extended part of a linear industrial block in the mid to background of the view frame.

Table 12.14.1 contd/. - Predicted Visual Impact

Predicted Visual Impact							
Visual Receptor	**Category**	**Description of Receptor**	**Min & max. Distance to Proposal**	**Sensitivity of Receptor**	**Scale of Change**	**Degree of Visual Impact**	**Description of Impact**
7.0 City Centre (Harbour & Long Walk area) (see Plate 9)	Residential	A city centre residential area at a similar low lying level as the proposed port, consisting of a mixture of mainly houses (Long Walk) to mainly medium rise apartments (Harbour Area). There are clear views to the proposal from the upper level sea facing apartments, in particular, Aengus House, Dun Aengus, Ce na Mara, Dock Gate, Hynes' Yard and Queens Gate developments and restricted or oblique views from ground level houses.	380m to 560m	Medium (Harbour) to High (Long Walk)	Neutral	Slight	Both the extent and scale of the development is visible from the upper level sea facing apartment units. There is intrusion into the view of the fore to middle ground existing seascape from the Harbour and Old Mud Dock area apartments. The houses and apartments on Long Walk are more focused onto the River Corrib with only oblique views to the proposal. The existing harbour apartments have views to the existing harbour basin and the general visual landscape of a working harbour and adjacent industrial Enterprise Park. The relocation of harbour activities and inner harbour industrial buildings to the harbour extension will improve localized views.
8.0 Mellows Park (see Plate 13)	Residential	A cluster of 20 houses adjoining the railway embankment with partial linear views to the proposed site. Visibility is obstructed by extensive surrounding vegetation.	425m to 625m	Medium	Negative	Moderate	There are partial views to the proposal because of extensive vegetation which screens the majority of the development. It forms an element in the existing view and intrudes in the general middle ground of the view frame, blocking the view to the seascape and partially intruding on the view to the background. The proximity and partial visibility of the existing bus depot and Enterprise Park provides an established industrial context. The visible portion of the harbour extension adds to the industrial block elements in the visual composition.

Table 12.14.1 contd/. - Predicted Visual Impact

Predicted Visual Impact							
Visual Receptor	**Category**	**Description of Receptor**	**Min & max. Distance to Proposal**	**Sensitivity of Receptor**	**Scale of Change**	**Degree of Visual Impact**	**Description of Impact**
9.0 Ballyloughan	Residential	A relatively small group of approximately ten houses located low in the landscape either side of Ballyloughan Strand. The houses have views to the proposed site varying from full to partial to oblique. Views to the site are generally over the strand and foreground water area with the city profile in the background.	1.2km to 1.75km	Medium	Negative	Slight	The full extent of the development is visible and is a low, narrow intrusion into the middle ground of the view frame. It obscures the view to the western outline of the city and brings a new element of the commercial port into the visual landscape. The view to the strand and general foreground seascape remains unchanged. The proposal is a minor element in the overall panoramic view.
10.0 Renmore/ Murrough (see Plate 14)	Residential	Adjoining medium density suburban housing developments on the gently rising landscape from the seashore to the Dublin Road. Predominately two storey, they have views from the sea facing houses at ground level varying from partial to screened views depending on the elevated location. The existing railway line embankment and associated vegetation provide a visual barrier at the lower slopes of both areas.	1.2km to 3.0km	Medium	Neutral to Negative	Slight to Moderate	Views to the proposal are generally partial because of the existing landform vegetation and railway embankment. The partial views vary from horizontal to vertical segments of the harbour extension including the commercial port, ships, buildings and cargo. Because of the distance to the proposal, the partial views form only a component element of the general view available to the overall bay areas. In the views where the proposed site is most evident, (as in Plate 14) the proposal is a horizontal visual intrusion into the middle ground of the view frame and introduces a harbour extension element into the visual composition.

Table 12.14.1 contd/. - Predicted Visual Impact

Predicted Visual Impact							
Visual Receptor	**Category**	**Description of Receptor**	**Min & max. Distance to Proposal**	**Sensitivity of Receptor**	**Scale of Change**	**Degree of Visual Impact**	**Description of Impact**
11.0 Roscam (see Plate 16)	Residential	A cluster of approximately 40 low density houses in a rural setting. In general only the sea fronted houses will have views to the proposal (approx. 1/3 of the houses) and some of them will only have partial view due to the landform or existing vegetation. The small limited number of foreshore fronted houses will have greater visibility to the new port.	2.6km to 3.7km	Medium	Negative	Slight	The houses to the northern end of the cluster will only have visibility to the southern portion of the new port because of obstructions from the existing coastline. The seafronted houses to the southern end will have restricted views to most of the proposal due to existing landform and vegetation. The majority of houses will have little or limited views only. The intrusion into available views will occur in the middle to background of the view frame. Due to the distance between receptor and the proposed, the port will be a singular horizontal element in the overall linear view towards the city and bay.
12.0 City Centre Lough Atalia to River Corrib	Non-Residential	A series of medium rise city centre commercial properties, in particular, hotels which have elevated views over the general bay area from their upper floors. The hotels including the Radisson, Harbour, Meyrick and Jury's Hotel, have views ranging from screened to partial views of the proposed site.	0.5km to 0.9km	Low to Medium	Neutral	Slight	There is partial visibility of the proposal from the upper and penthouse floors and where the scale of the development is evident with the elevated views. There is intrusion into the view of the mid ground area of the view frame to the bay. The harbour extension will be a component and not the central focus of the view to the bay. Existing industrial character of the Enterprise Park and existing harbour is already in the view frame. The receptors cater for transient non-residents so the visual impact is not as important as for a more permanent viewer.

Table 12.14.1 contd/. - Predicted Visual Impact

Predicted Visual Impact							
Visual Receptor	**Category**	**Description of Receptor**	**Min & max. Distance to Proposal**	**Sensitivity of Receptor**	**Scale of Change**	**Degree of Visual Impact**	**Description of Impact**
13.0 Salthill (see plate 2)	Travelling	Scenic coastal road from Salthill to the Claddagh (see 2.0 for details)	0.9km to 3.3km	Exceptional	Neutral	Slight	See 2.0 for description of impact.
14.0 Wolfe Tone Bridge to Claddagh Quay (see plate 7)	Travelling	Inner city bridge over the River Corrib and road fronting onto the Corrib estuary, canal basin and quay area. The route has partial views toward the proposed site obstructed by the Long Walk/Mud Dock to the north/east and Nimmo's Pier South Park to the south/west.	150m to 680m	Medium	Negative	Slight	There is a partial framed view to the proposed between the Long Walk and Nimmo's Pier, which obstructs the visibility to the open sea. The higher elements of the proposed are visible over Nimmo's Pier. The marina element of the proposal provides a maritime context, but does not screen its scale.
15.0 Dock Road (see plate 10)	Travelling	City centre road fronting onto the existing harbour basin. The road has full views of the existing harbour enclosure. It has partial views towards the outer bay waters which are restricted and screened by existing buildings, quays and general harbour activities.	570m to 800m	Medium	Negative	Slight	The proposal blocks and obstructs the existing partial views to the outer bay, consisting of a linear intrusion closing off the visual aperture between existing harbour buildings and the centre pier area. With the relocation of the existing harbour operations and buildings to the harbour extension, which is a positive impact, the visibility of the proposal maintains the visual link between the city and port.
16.0 Circular Road (see plate 1)	Travelling	An elevated scenic, semi-rural route with panoramic views of the city and bay area. The city landform and built outline prevents full visibility to the new port site.	2.9km to 3.2km	High	Neutral	Slight	The outline of the port is visible but does not intrude into the view frame. Due to the distance from the receptors, the detail of the proposal is not evident but large elements such as ships are recognizable. The development forms a small element in the general panoramic view.

Table 12.14.1 contd/. - Predicted Visual Impact

Predicted Visual Impact							
Visual Receptor	**Category**	**Description of Receptor**	**Min & max. Distance to Proposal**	**Sensitivity of Receptor**	**Scale of Change**	**Degree of Visual Impact**	**Description of Impact**
17.0 Railway Line (see plate 12)	Travelling	A view from a train travelling on the elevated railway line embankment. The receptors have a fleeting glimpse to the seascape area of the proposed site and beyond with the existing Enterprise Park in the foreground.	250m to 800m	Low	Neutral	Slight	There is a fleeting partial visibility to the proposal with the existing Enterprise Park restricting the view to the eastern section of the new development. The glimpse view will show a larger industrial block element in the view frame partially intruding into the visibility of the seascape area.
18.0 Galway Bay	Travelling	People using the bay for ferry, sailing and other boating activities will continuously have different views of the proposal depending on the location, direction of travel and distance to the new port.	Various	High	Negative	Slight	People using the harbour for sailing and other boating activities will continuously have different views due to the moving nature of the receptor. The proposed development will therefore not appear in all view frames. When it does appear, the magnitude and extent of impact will vary with the distance between receptor and proposal. The proposal will be viewed from the lowest level in the visual envelope where the development will break the skyline on approaching views.

Table 12.14.1 contd/. - Predicted Visual Impact

12.15 NIGHTTIME VISUAL IMPACT

12.15.1 Proposed Light Sources

The operation of the port facility will require the use of outdoor night time lighting. Permanent lighting will be used in port operations during night time hours and for security at the proposed port facilities. Full details of lighting consisting of full cut-off floodlighting at approximately 30m centres and varying from 6m to 25m high, can be found on the site lighting services drawing Nos. LS12090-1 to LS12090-5 in EIS Volume 2D - Drawings. The lighting level proposed will be a maximum of 300 lux and be similar to the existing city centre lighting level.

Other light sources associated with the proposal are lights used internally such as lights from the various buildings and ships. When ships are in dock they will provide the single biggest night-time visual impact as they are required to have their full lights on all night for operational purposes. It should be noted that cruise ships will generally not stay overnight except on the rare occasion and will tend only to be in dock between 6am and 6pm to 8pm. Finally, lights from vehicles accessing the site will also be an associated light source.

12.15.2 Light Pollution

Outdoor night time lighting can contribute to light pollution of which there are different forms. Sky glow is the form of light pollution that will have an effect on the visual impact assessment. Sky glow is the brightening of the night sky above towns, cities and countryside caused by light that is directed upwards.

The scheme uses directional lighting with screening baffles which reduces upward and lateral light pollution. Consequently, the addition of large-scale lighting to existing night views of the port and particularly the portion of the site proposed to be reclaimed from the sea will not result in an increase in sky glow on the night time viewframe from any viewpoints around the port and it is predicted not to affect night time views. The main night time impact will be caused by the fact that the proposal will be lit and thus visible as a distinct element in the night time landscape. However the incidence when ships are in dock overnight will be the biggest source of night time impact because of their requirement to be fully lit all night.

12.15.3 Visual Impact

The existing Galway Harbour and Enterprise Park and in particular the Bus Éireann bus depot adjoining the site uses floodlighting structures. The existing structures are high lighting masts of roughly between 20m and 30m in height, with a number of floodlights on each mast. The general landscape around the port also has areas that are lit during the night. These areas include the urban and suburban areas of Long Walk, Claddagh, Mellows Park and Renmore. The existing night time views included in the photomontage in the appendix gives an impression of the landscape and the proposed site at night and also includes instances of fully lit ships when in dock overnight.

All visual and travelling receptors indicated in the existing landscape Table 12.9.1 are subject to visual impacts created by the proposed lighting. The amenity areas will not be impacted, as these are generally not used at night. The descriptions of visibility of the proposal as described in Table 12.14.1 also apply to night time views. However, at night time the proposed lit up development will stand out more against the darker environment than compared with the day time views. The large number of proposed lights makes the proposal visible and produces more light than the existing situation. It will be an additional large light source in their view frames at night. The moving of the lit up crane and internal equipment, will also draw attention as opposed to stationary lights. The degree of impact stated in the aforementioned tables is predicted to remain the same for night time visual impacts.

The residents of the Claddagh, Long Walk and Mellows Park will be the most vulnerable, due to their proximity to the proposal. The impact on these residents will increase due to the fact that the proposal will stand out more at night than during the day, due to the number of lights and the moving lights caused by the crane and internal equipment. The lights mounted on any ship cranes will also draw the attention of these particular visual receptors, due to the proximity and the lights being circa 22m above ground level. The existing view frames do comprise floodlights at the existing Enterprise Park and in particular at the bus depot. However, the proposed lights will form a new element in their view frame. Other parts within their view frame will however remain unchanged. The degree of visual impact is predicted to be the same as the mitigated daytime impact.

It should be noted that the site is located at the urban waterfront of a city that has existing general street lighting and specific site lighting in various locations. This lighting is part of the nature and characteristics of a city and a contributing element to its urban drama and excitement. Lighting is also part of the expectation of being in a city and with the exception of creating adverse light pollution is seen as a positive benefit of residing, working or visiting a city environment. In particular, the proposed lighting to the western boundary of the new port reflects that at Nimmo's Pier and provides an attractive, illumination of the western marina, which is appropriate for a maritime urban waterfront.

12.16 CONSTRUCTION PHASE

12.16.1 Proposed Construction Works

The construction in four phases is estimated to take five years. Full details of the construction, phasing, machinery and number of machines used is set out in Chapter 4, (Project Description of Proposed Development). The main construction stages that will cause visual impacts are:

- Dredging.
- Land reclamation and formation of lagoons.
- Quay construction.
- Piling.
- Surfacing of roads and hard areas.
- Rail link construction.
- Construction of buildings.
- Contractor's compound.

The main equipment used for these activities are:

- Dredging vessels.
- Barges.
- Pile driving rigs.
- Bulldozers.
- Excavators.
- Road surface laying equipment.
- Dump trucks.

The construction phase will also have associated activities that may affect visual receptors. Associated activities include H.G.V traffic accessing the site from both the west and east side of the city.

12.16.2 Visual Impact

The main visual receptors to be impacted will be residents located around the port site: residents of existing harbour, Long Walk, Claddagh and Renmore, as these have a view towards the development. Other identified visual receptors in Table 12.19.1 are likely to be less impacted, due to the large distance between proposed works and receptors.

The water-based dredging and construction equipment used during the construction phase will create the main impact on residents in closest proximity to the site during the construction phase. The location of the construction machinery will make it highly visible. The driving of steel piles will have a high visual impact due to the vertical height of piling rigs. However, the machinery will not block the views from these visual receptors but it will intrude upon their views.

The degree of construction phase impacts will be slightly less than that which will be experienced during the operational phase of the development, due to the less intrusiveness of the activities and structures. The period of the overall construction phase is five years which will cause a short-term impact. Temporary impacts will be created by the movement of vessels up and down the harbour for the import and disposal of material. Whilst the four phase construction period will take five years, the primary visual extent and scale of the port will be completed in phase 1, over two years. Subsequent phases will be constructed in conjunction with the new working port as established in Phase 1, which will tend to screen construction operations, particularly from the eastern environs and generally assist in making construction activities less visible and obvious.

In terms of mitigation measures, they are divided into physical and operational measures. In relation to physical measures, the construction compound for the proposed development is located in the existing Enterprise Park adjacent to the bus depot and consequently is substantially screened from view from both the eastern and western environs. In terms of operational measures, dredging operations will be excluded for the months of April, May, June and July. In addition there are proposed maximum noise levels for night time operations. While drilling, blasting, pile driving and back hoe dredging operations will not operate at night, other construction activity may operate on a 24/7 basis and consequently lighting will have a similar impact as during the working operations of the completed port.

It should be noted that construction operations tend to have a different level of acceptance and tolerance because of its temporary nature as distinct from the more permanent operational phase. Whilst a five year construction phase is relatively longer than most construction projects, Galway Harbour Company will continually display and update their website with details of the construction operations during the construction phase to keep the public informed on the phasing, operations, progress and estimated completion dates for each phase of the development. This will help to appraise the public and in particular the most affected immediate residents in regard to the relatively lengthy construction stage of the project.

12.17 MITIGATION MEASURES

12.17.1 Design

The design of the harbour extension development has helped to reduce its visual impact. The final layout has been reduced in scale from previous layouts as outlined in Section 3.5.3. The provision of a new marina and associated public amenity area on the western boundary and the Nautical Centre, slipway and open space on the eastern boundary act as both a filtering and softer edge to the core port activities at the centre and eastern boundary.

12.17.2 Landscaping

Landscape mitigation measures are those taken to help reduce visual impacts. Full details of the landscaping installation are outlined below in section 12.18. The aim of the landscape mitigations is to provide screening to reduce the negative visual impact of the proposal. The openness of the port and the size and the nature of the development do not allow for sufficient scope of mitigation by the implementation of the soft landscape components to physically and visually integrate the proposed port development into the surrounding landscape. This is particularly so on the eastern side of the development where the proposal is fully waterside based; allowing vessels to dock, moving of vehicles along the quay, cargo stacking directly behind it and the roll-on roll-off berth activities. This prevents screening mitigation to be possible at the eastern site boundaries for views from those directions. On the western site boundary, the public amenity edge facilities and the landscape screening mitigate for the full extent of the proposal. This was deemed appropriate and necessary as views from the immediate western receptors are more visually impacted than those from the eastern environs. In particular, the existing views from the west have a softer, greener backdrop whilst views from the east have the backdrop of the harder built profile of the city.

The following specific visual effects have been derived from the landscape plan to provide mitigation of the proposal particularly from local western visual receptors.

- Screening to the central cargo area and general port operations.
- Softening of the hard nature of the overall port proposal.
- Greening, to reflect the landscape backdrop of the eastern environs of the city.

12.17.3 Use of Colour

The choice of colours to the various buildings, have been generally restricted to neutral matt colours to lessen their visual impact. The combination of neutral tones and green landscaping will provide a restrained permanent base environment for the variable, more colourful elements of the ports maritime and industrial elements.

12.17.4 Lighting

Mitigation measures have the potential to reduce construction and operational night time impacts, which would potentially be able to mitigate visual impacts by night. These include:

- Use of downlight style cut-off luminaires within quay/cargo yard areas to prevent up-lighting and reduce sky glow.

- Use of downlight style cut-off luminaires on any mobile cranes to prevent up lighting and reduce sky glow.

- Use of lighting control systems to reduce amount of light spill, sky glow and visual appearance during periods of low activity.
  (see visual plates 17, 18, 19 and 20 in the EIS Volume 2D - Drawings)

12.18 LANDSCAPE PROPOSALS

The landscape proposals are indicated on Landscape Drawings Fig. 1 to Fig. 7 in EIS Volume 2D – Drawings. The proposals take account of the scale and location of the proposed harbour extension.

The new harbour is envisaged as a working harbour with storage yards, marina, fishing and shipping as the principle land usage. This envisages that along with the necessary vehicular and pedestrian circulation that the predominately surface finish will have a hard landscaping finish. A range of hard landscaping materials to define the pedestrian and vehicular circulation routes will be utilised to further enhance the visual landscape, within the sites boundaries.

The landscape master plan envisages that within the new harbour lands the visual scale of the port lands would be containment by mixed woodland planting. The visual compartments will provide screening both within the site and partial screening of proposed elements when viewed from locations outside of the site.

The mixed woodland screen planting envisaged along the sites south western boundary and extended northwards, as a site screen, behind the new harbour buildings, will provide on maturing, a canopy outline with partial screening of the new harbours operations. Due to the exposure of this planting to the prevailing elements it is necessary for the establishment planting to be protected and maintained for the initial period. Protection of the planting during the establishment period will include netting, screening and trunk wrapping. Regular monitoring of the protection will be undertaken and adjustments to the various protection methods will be directed on site.

Planting will include a predominately mix of native species including;

Betula pendula	Birch
Quercus robur	Oak
Quercus petraea	Oak
Prunus spinosa	Blackthorn
Alnus glutinosa	Alder
Ilex aquifolium	Holly
Euonymus europaeus	Spindle
Prunus avium	Cherry
Fraxinus excelsior	Ash
Sorbus hibernica	Mountain ash
Sorbus aucuparia	Irish whitebeam
Sambusuc nigra	Elder
Viburnum opulus	Guilder rose
Crataegus monogyna	Hawthorn
Corylus avellana	Hazel
Ligustrum vulgare	Wild privet
Cornus sanguine	Dogwood
Hedera helix	Ivy
Senecio vulgare	Common groundsel
Salix pentandra	Willow
Taxus baccata	Yew
Ulex europarus	Gorse
Rhammus cathartica	Buckthorn

It is intended, that in some instances, the mature canopy of the proposed woodland planting will form the sky outline as a back drop to the new harbour lands, especially when viewed from the Galway City and its environs, to the west of the site. The planting to form this canopy is the mixed woodland planting indicated along the sites eastern boundary.

The mixed woodland planting is shown, along the sites eastern boundary, as following the railway line with dense planting to the rail line embankments. This planting will extend out into the amenity open space lands and will provide, on maturing, a tree canopy outline with partial screening of the new harbour lands when viewed from lands along the sites eastern boundary.

Planting will include a mix of native, as noted above, and introduced species including;

Carpinus betulus	Hornbeam
Acer platanoides	Maple norway
Acer campestre	Maple field
Acer pseudoplatanus	Maple sycamore
Alnus cordata	Alder
Elaeagnus angustifolia	Silverberry
Fagus sylvatica	Beech
Prunus serotina	Cherry
Quercus ilex	Oak holm
Tilia cordata	Lime
Larix kaempferi	Larch
Pinus nigra	Pine
Pinus pinaster	Pine
Pinus sylvestris	Pine scots
Thuja orientalis	Thuja
Cornus siberica	Corn Siberian
Symphoricarpos hancock	Snowberry
Buddleia davidii	Butterfly bush
Vinca major	Vinca

The amenity lands to the east of the site are envisaged to afford locations for picnic, wildlife watching, playing on the maintained grassed areas and for boating and bathing activities at the set of “canoe” steps provided. The landscape proposals as envisaged together with the provision of pedestrian and bicycle circulation routes across the site will ensure that the new harbour will add to the amenity of Galway City for its citizens in both their environmental and leisure activities within the city.

Plant Selection, it is proposed that all plant selection would be based predominately on a selection of native Irish species. If necessary especially during plant establishment period a selection of non native species will be used, these plants would later be removed to allow the native species to form the long term dominant species in the mixed woodland areas.

The plant schedules are noted above. Depending on the planting season and on the availability of species there may be a few substitutions of plant types.

Plant Development, to ensure that the selected plants have an establishment advantage, it is intended that the plants range would be propagated and allowed to develop in a dedicated nursery on lands beside the proposed development**.** This establishment period would allow the proposed plants to acclimatise to the general and microclimate of the area.

Plant establishment utilizing locally propagated and developed plants would ensure the early establishment of the proposed planting. Plants that are not available locally or are not available as seedling or as a plant cutting would be imported but before planting onsite would be set to harden off in the site nursery, before planting into the final position on site.

On completion of the development the plants could be transplanted directly from the nursery to the final location on site. Planting would be undertaken on phased bases in line with the completion of the construction site. Planting would take place in the first available season following completion of the site and development works for each phase.

Planting Densities, the planting will be set at two plants per square meter for small growing shrubs up to one and half plants per meter for larger growing shrubs. Trees will be planted at one per square meter that will be thinned out later to allow the tree canopies develop. The long term canopy will resemble mature woodland located in a sea shoreline.

Planting techniques will follow forestry planting practice, with allowance made for the natural development of the plants in a particular location.

Planting, plants will be set into prepared planting beds with imported soil set on patent sheet material, such as Terram, to form an impregnable layer. The sheet material will contain the imported soil to prevent the soil washing into the site build up.
In the proposed planting along the site's south western projection into the sea it is intended that the plants will be set into imported soil that is contained by a patent sheet material. This material will be set on a root barrier zone formed with a layer of moss peat set on a sheet material.

In the proposed mixed woodland planted areas on the site's eastern boundary the root barrier layer would be set at least 0.6 meters below the finish soil level.

Soil Placement, the soil for the planted areas will be imported good quality subsoil, type to be approved by landscape architect, before importing onto site. Soil for grassed areas to be good quality top soil minimum 200 thick layer, the top soil to be laid on the imported subsoil. Imported soil to have a good structure and texture and have a neutral pH level.

The soil to be laid into planted areas where indicated, soil laid on patent sheet material. Final soil levels to be even flowing with no humps or hollows. Soil cultivation to be untaken by approved landscape contractor.

Irrigation, following completion of the planting contract and to ensure that the plants survive a piped irrigation system will be laid out. The irrigation system will be surface laid and have a trickle irrigation supply to each plant.

The trickle irrigation to be a self regulating system, the system will also have an automatic compensation control for water pressure variations.

Plant Protection, the proposed planting would be set behind wind shield barriers to assist the plants during the plant establishment period.

The wind shield protection will be formed with patent metal posts with wind shield netting fixed to post. The post to be set into concrete footing and be fixed to manufactures instructions.

Sustainable Landscape, the selection of native Irish species and the placing of plants within 5.0 m to 10.0 m deep mixed woodland groupings with trees and under storey shrub planting and using mixed woodland management techniques, the dense planting as envisaged, will succeed in maintaining a regeneration process to ensure the long term viability of the planting.

In selected locations sections of canopy bearing plants will be omitted to allow the woodland base natural flora to evolve. This evolution of the base flora plants will reinforce the natural plant selection in the long term. This long term viability will require regular monitoring and maintenance to promote and sustain the proposed planting.

Wildlife Corridors, as indicated on the landscape Masterplan the principle planting groups are set out in mixed woodland belts using a mixture of trees and shrubs. The canopy cover together with the diversity of planting will encouraged a movement of wildlife through the site.

To assist the wild life movement through the site it is intended to supply within each planted area a shrub layer that would provide cover to wild life moving within the site. The shrub layer would also provide a food chain that would sustain the wild life movement within the site and encourage a diversity of wildlife types

Along the amenity lands to the east of the site it is proposed to form, using soil contouring, a fresh water pond in a natural setting. This pond will have fresh water related planting and will encourage a natural setting for fauna. This pond is situated away from any proposed port operations and has a viewing platform with a bird watching shelter. This pond and shelter is situated in close proximity to the existing salt marsh lands at Renmore.

Further development of the landscaping master plan is to provide information boards with pictures of the flora and fauna as it is developing throughout the site in the amenity lands along the sites eastern boundary and adjacent to each end of the marina on the western side.

Monitoring of the development the sites wildlife will be regularly undertaken. This monitoring is very important and is necessary in order to achieve and maintain a balanced wildlife regime. The monitoring will be undertaken by both; site observations and species monitoring. Adjustments may have to be made to plant development and species selection on ongoing bases to ensure that a reasonable balance is achieved in the developing wildlife communities.

Biodiversity, the proposed planting throughout the site is mixed woodland planting with under planting of shrubs in selected locations. Along the sites north eastern boundary the woodland canopy is extended into the amenity lands. This woodland planting will be ecologically reinforced with grassed areas with a mixture of wild grass types and wild flowers. As stated, it is intended to allow for gaps in the woodland canopy to allow the ground floor flora to develop. This ground floor level of flora will provide cover for wildlife and will add to the diversity of plants. Floor level planting will contain woody shrubs and a selection of herbaceous plants. The herbaceous plants will also be predominately native species will a selection of introduced plants.

This diversity of plant types and linking / proximity of landscape areas will encourage a biodiversity of wildlife within the sites boundary.

Visual Direction, a sculpture will be placed on urban focal point between the pedestrian route within the proposed Galway port lands that can be viewed from both Dun Aengus Dock and Nimmos Point. This viewing point will ensure that a visual link is maintained with the existing pedestrian view points and pedestrian routes that are close to Galway City centre.

A sculpture piece will be of a visually striking size and design that will be seen as a visual extension of the urban fabric of Galway City. The proposed theme of the sculpture piece would be linked to Galway City and to Corrib River. The sculpture and pedestrian link point will have up lighter lighting units to assist visual orientation for pedestrians and cyclists in this area. Further sculpture pieces will be located at the entrance to the marina and to the commercial port at the extremities of the breakwater walls.

Service Lines, In general the landscape Masterplan also envisages that all service lines will be placed underground in service ducts; this will remove any visual objection of overhead lines. The placing of services underground will also minimise the potential damage to fauna on site.

Management and Planting Maintenance, to ensure that the proposed planting objectives are achieved and to allow the planting fully develop as illustrated in the landscape masterplan it is necessary to put in place a management and maintenance regime. The planting and general landscaping programmes will be undertaken to BS 4428. The management and maintenance will be undertaken and be regularly monitored with adjustments being made and where necessary a regular replacement of failed plants will be made. Also plants, including shrubs and trees, that fail to thrive will be replaced, in the first planting season following its removal.

12.19 RESIDUAL IMPACTS

12.19.1 Residual Visual Impacts

This section of the report assesses the impact of the proposed development on the visual receptors, after the landscape mitigation has attained 10 - 15 years of growth. Residual visual impacts are described in Tables 12.19.1. The visual impact for visual receptors, which were identified in Tables 12.9.1 and not identified in the Tables below, will remain as per Table 12.14.1.

Predicted Residual Visual Impacts				
Visual Receptors	**Scale of Impact**	**Degree of Visual Impact before mitigation**	**Degree of Visual Impact after mitigation**	**Description of Residual Impact**
South Park Area Long Walk Area (see plates 8 and 5)	Negative Negative	Moderate to significant Moderate	Slight to Moderate Slight	The proposed screen planting will screen a large portion of the cargo area and provide a general screening of the proposed to reflect the backdrop of the existing view. The extent of the proposal will still be visible and intrude on the view.
Mellows Park Renmore/Murrough area (see plates 13 and 14)	Negative Negative	Moderate Moderate	Slight Slight	The proposed landscaping will introduce a green planting element in the middle ground of the view consistent with the foreground vegetation cover. The visible extent of the proposal will still intrude on the view.

Table 12.19.1 - Predicted Residual Impacts

12.19.2 Residual Landscape Character Impacts

This section assesses the impact of the proposed development on the landscape character areas after the landscape mitigation has attained 10 – 15 years of growth. Residual landscape character impacts are described in Table 12.19.2. The landscape character impacts which were identified in Table 12.11.1 and which are not identified in the table below will remain as per Table 12.11.1.

Predicted Residual Landscape Impacts				
Landscape Character Areas	**Scale of Impact**	**Degree of Impact before mitigation**	**Degree of Impact after mitigation**	**Description of Residual Impact**
Urban Waterfront Landscape	Negative	Moderate to Significant	Slight to moderate	The proposed landscaping will introduce a green element into the extension of the existing maritime/ industrial landscape which is more consistent and reflective of the amenity nature of the urban waterfront landscape.

Table 12.19.2 - Predicted Residual Landscape Impacts

12.20 "WORST-CASE" IMPACTS

Impacts arising from the development in the event that all mitigation measures substantially fail would be confined to adverse visual and landscape character impacts. The worst-case scenario in terms of visual and landscape character impacts would occur if the proposed mitigation planting along the western boundary did not grow and mature, as the proposed planting is an important component of the visual impact mitigation measures. The failure of this landscape proposal would lead to a lack of mature screening elements within the site.

Should the landscaping fail for whatever reason, this will result as described in Tables 12.11.1 and 12.11.2. The failure of planting will have a negative visual and landscape impact on the receptors and areas identified in Tables 12.19.1 and 12.19.2. Should the planting fail then the degree of impact on these receptors and areas will be as stated in Tables 12.11.1 and 12.14.1. Any failed planting will be replaced in accordance with the maintenance programme as provided in the Landscaping details in section 12.18.

12.21 NON-COMPLETION IMPACTS

Visual impacts arising from failure to complete the development will depend on the portion of the proposal left unfinished. For the purposes of this assessment it is assumed that it is a phase of construction that does not proceed rather than part of a phase that is incomplete. It is also assumed that Phase 1 is completed given that the port is not operational without the completion of this phase. The completion of Phase 2 and 3 will not have a significant visual impact as the primary infrastructural scale of the development is already established in Phase 1. Were there to be a failure to complete Phase 4 then same would have the most significant impact particularly for receptors in the immediate western and north western environs. The marina provides a maritime character to the western edge of the development which helps to mitigate the more industrial nature of the remainder of the port. The absence of a concentrated block of sailing and pleasure craft will remove the nautical nature of the western boundary edge and expose the more industrial nature of the central cargo storage area. The impact is both visual and one of perception. Whilst the marina breakwater as constructed in Phase 3 will partially obstruct view of the sailing and pleasure craft, the masts and sails will be highly visible and forms an attractive filter to views of the port storage areas. Their absence would change the perception of the proposal from being a combined port and marina development, to one of an exclusively commercial port project. The landscaping details in the appendix section also provides for landscaping measures to be undertaken to ensure visual mitigation in the case of partial development, in particular, were only Phase 1 to proceed or if Phase 4 was not completed. The

photomontage package, also in the appendix section, reflects and indicates these landscape mitigation measures.

In summary, the "worst case" scenario in terms of partial completion is where the proposal is completed to phase 2 only which would leave the port development without the marina to its western side and without the slipway and fishing pier to its eastern side. Consequently, the photomontage package contained in EIS Vol. 2D – Drawings [Plates 3, 4 & 6] indicates the instance where only phase 2 is completed and the following section provides a visual and landscape character assessment of that scenario. It is clear from the photomontage package that the completion to phase 2 only impacts on the landscape and views on the immediate western side of the proposal.

Predicted Visual Impact of Completion to Phase 2 Only				
Visual Receptors	**Scale of Impact**	**Degree of Visual Impact to Phase 4**	**Degree of Visual Impact to Phase 2**	**Description of Residual Impact**
South Park Area	Negative	Moderate to significant	Significant	The omission of the western marina has removed the softer portscape element of the view of the new proposal and exposes the more maritime industrial element of the proposal to the visual receptors.
Nimmo's Pier (see plates 4 and 6)	Negative	Moderate	Significant	

Table 12.21.1 - Predicted Visual Impact of Completion to Phase 2 Only

Predicted Landscape Impact of Completion to Phase 2 Only				
Landscape Character Areas	**Scale of Impact**	**Degree of Impact to Phase 4**	**Degree of Impact to Phase 2**	**Description of Residual Impact**
Urban Waterfront Landscape	Negative	Moderate to Significant	Slight to moderate	The omission of part of the proposed landscaping removes some of the green element of the proposal, which is more consistent with the amenity character of the urban waterfront landscape.

Table 12.21.2 - Predicted Landscape Impact of Completion to Phase 2 Only

12.22 CONCLUSION

The proposed port development consists of a reclaimed peninsula protruding from the existing Enterprise Park out into the bay waters to provide fixed infrastructural elements such as quay piers, buildings, storage areas, roads and rail link to cater for the variable operational elements of ships, boats, cargo, cranes, trucks and freight train. The proposal is located in an open land and seascape of a maritime and industrial nature. Six distinct landscape character areas were identified within the study area of which the proposed development will have a permanent, slightly negative impact on three areas: the Harbour industrial maritime landscape, the Urban

settlement landscape and the undulating coastal and island landscape and a permanent moderate to significant negative impact on one area, the urban waterfront landscape. The open nature of the environment makes the site visible from viewpoints around the site in particular its western and eastern environs. The main visual impact will be caused by the linear horizontal reclamation and particular elements such as ships, cargo and crane.

The day time impacts vary from neutral up to moderately to significantly negative and night time impacts from neutral to slightly negative within the study area. Views form particular receptors (South Park, Long Walk area, Mellows Park and Renmore/Murrough) will be impacted in a moderate to significant or moderately negative way.

The nature of the proposed development provides limited scope for visual mitigation. Mitigation measures such as the implementation of screening planting, light spill reduction and colour recommendations are proposed. For particular receptors such as the South Park, River estuary area, Mellows Park and Renmore/Murrough the impact will be reduced but will remain moderate or slightly negative. For a limited number of visual receptors the mitigation measures will result in a reduction of impact from slightly negative to neutral. In terms of landscape, the mitigation measures reduce the impact in the urban waterfront landscape from moderately to significantly negative, to moderately negative.

In summary, the range of mitigated visual and landscape character impacts vary from neutral to moderately negative. Consequently, all of the changes to the views as impacted by the proposal, can be absorbed and will not be detrimental or jeopardize the experience or enjoyment of the impacted landscape or views. It is felt that the existing landscape and visual resources in the study area has the capacity to accommodate a project of the nature and scale proposed.