

## 16 LANDSCAPE AND VISUAL IMPACT

### 16.1 Introduction

The term 'landscape' refers primarily to the visual appearance of an area, including its shape, form and colour and the interaction of these elements to create specific patterns that are distinctive to particular localities. Landscape is also not purely a visual phenomenon. Its character relies closely on the local physical geography and environmental history. Besides any scenic and/or visual dimension, there are also a whole range of other constituents of significance. These include:

- Topography
- Ecology
- Landscape history
- Land use
- Buildings and settlement
- Architecture

This section describes the existing landscape in the vicinity of the proposed pipeline corridor and the visual character of the local landscape. This section also set out the factors that impinge on the landscape and visual characteristics of the locality, setting out how the proposed development interacts with them and specifying any significant effects.

### 16.2 Study Area

The assessment area has been defined, with reference to the potential for landscape and visual impact from the proposed scheme by a distance of 500m from the proposed pipeline corridor.

### 16.3 Assessment Methodology

This landscape and visual impact assessment has been undertaken in accordance with the following guidelines:

- Department of Environment and Local Government - *Landscape and Landscape Assessment, Consultation Draft of Guidelines for Planning Authorities, June, 2000*
- The Landscape Institute - Institute of Environmental Assessment – *Guidelines for Landscape and Visual Impact Assessment, 2<sup>nd</sup> Edition, 2002.*

#### 16.3.1 Existing Landscape Assessment

The landscape character, values and sensitivity of the area in the vicinity of the proposed pipeline corridor is outlined in accordance with the Department of Environment and Local Government Guidelines - *Landscape and Landscape Assessment, Consultation Draft of Guidelines for Planning Authorities, 2000*. In these guidelines, landscape character, values and sensitivity are defined as:

- **Landscape character** can be established for an area where there is visual distinctiveness and identity through a continuity of similar characteristics. This description outlines 'what is physically on the land surface', resulting from geology, soils, hydrology, topography, vegetation and land-use
- **Landscape values** can be described as the environment or cultural benefits that are derived from various landscape resources. These resources may include physical and visual components
- **Landscape sensitivity** can be described as the extent to which a landscape can accommodate change without unacceptable loss of existing character or interference with values

A desktop study and walkover survey were undertaken to determine the existing landscape of the area and visual envelope of the proposed pipeline corridor within the area.

The patterns and scale of the landscape character including landform, landcover, land use and built development was determined using Ordnance Survey Ireland (OSI) Discovery Series Mapping of the area and available aerial photography and imagery of the route.

The proposed pipeline traverses both DCC in the south of the scheme and FCC's in the north of the scheme. The proposed pipeline corridor terminates within the Local Area Plan of Dublin Airport. Landscape values such as amenity areas, designated views and prospects, and historical archaeological and architectural heritage in the vicinity of the proposed pipeline corridor were identified using documentation and mapping provided in the:

- Fingal Development Plan 2011–2017
- Dublin Airport Local Area Plan 2006
- Dublin City Development Plan 2011–2017

The desktop survey aids in identifying the landscape areas and the sensitive receptors within the vicinity of the site that will be potentially impacted by the proposed development.

### 16.3.2 Visual Impact Assessment

The landscape impact assessment describes the nature and scale of changes to the landscape elements and character and outlines the effect of the proposed development on the landscape character of the area. Landscape impacts may be viewed as positive, neutral or negative.

The magnitude of the effects from the proposed pipeline on landscape is rated as follows:

- No change – very minor loss or alteration to one or more key elements/features/characteristics of the baseline i.e. the introduction of elements that are not uncharacteristic with the surrounding landscape
- Low – minor loss or alteration to one or more key elements/features/characteristics of the baseline i.e. the introduction of elements that may not be uncharacteristic when set within the attributes of the receiving landscape
- Moderate – partial loss or alteration to one or more key elements/features/characteristics of the baseline i.e. the introduction of elements that may be prominent but may not necessarily be considered to be substantially uncharacteristic when set within the attributes of the receiving landscape
- High – total loss or major alteration to one or more key elements/features/characteristics of the baseline i.e. the introduction of elements considered to be totally uncharacteristic when set within the attributes of the receiving landscape.

The significance of the change to the landscape is dependent on firstly the sensitivity of the receiving landscape or viewer as well as the magnitude of the change.

#### *Significance of Change*

The visual impact assessment will describe the visual effects or changes due to the proposed development. Visual impact may occur by means of intrusion and/or obstruction. These terms can be defined as:

- Visual Intrusion:** An impact on a view without blocking  
**Visual Obstruction:** An impact on a view involving blocking thereof.

Visual impacts on a particular view may be viewed as positive, neutral or negative. The significance of these effects will be rated as follows:

- *Little/None* - arises where the proposal is adequately screened by existing landforms, vegetation or the general built environment and there is no discernible deterioration within the existing view.
- *Low* - arises where views affected by the proposal form only a small element in the overall panorama and there is a perceptible deterioration within the existing view

- *Moderate* - arises where an appreciable segment of the panorama is affected and where may be readily noticeable to the receptor or where there is an intrusion into the foreground and there would be a noticeable deterioration within the existing view
- *High* - arises where the view is significantly affected, obstructed or so dominated by the proposal as to form the focus of attention and there is a significant deterioration of the existing view.

## 16.4 Existing Environment

### 16.4.1 Existing Landscape Character

Dublin city's landscape is both natural and man-made and consists of a pattern of streets and urban spaces within the natural setting of rivers and the bay and mountains to the south. The urban character consists of individual buildings, streets, urban spaces and neighbourhoods. The Dublin City Development Plan objective is to enhance and promote "*Dublin as a City of Character and Culture, promoting an active artistic and cultural community at city-wide and neighbourhood levels is central to making a vibrant city that is an attractive destination for tourism and the creative industries*".

It is recognised that the built heritage contributes significantly to the city's identity. The street pattern, local architectural features, the form of buildings and spaces, civic buildings, the unique Georgian squares and streets together with the larger areas of Victorian and Edwardian architecture, and the industrial buildings all contribute to the city's character and reinforce its identity. The proposed section of the pipeline within DCC's functional area, passes through some of these urban landscapes leaving the industrial landscape of Tolka Quay Road and East Wall area (Figures 16.1, 16.2 and 16.3), to pass by the recreational/amenity area of Fairview Park and the Alfie Byrne Open Space (Figure 16.4) along Alfie Byrne Road (Figure 16.5) and continuing through a mix of urban settings such as residential, amenity and commercial (Figures 16.6, 16.7, 16.8) along Clontarf Road, Howth Road, Copeland Avenue and the southern section of the Malahide Road (R109), mixed services, industrial and residential (Figures 16.9) at the northern section of the Malahide Road (R109) from Coolock to Clare Hall and primarily open space/green areas with some residential (Figures 16.11) at the northern end of DCC's functional area along the R139 (Malahide Road) passing Darndale and Belcamp Parks. There is also institutional, educational, community and mixed service facilities dispersed through these areas.



**Figure 16.1: Tolka Quay Road, looking east**



**Figure 16.2: East Wall Road Looking south east**



**Figure 16.3: East Wall Road (near junction with Alfie Byrne Road), looking east**



**Figure 16.4: Alfie Byrne Road, looking south**



**Figure 16.5: Clontarf Road, looking west**



Figure 16.6: Howth Road, looking north



Figure 16.7: Copeland Avenue, looking north



Figure 16.8: Malahide Road at Donnycarney, looking south



**Figure 16.9: Malahide Road at Artane, looking south**

Within the FCC area (eastern section of Malahide Road (R139) to Dublin airport section of pipeline corridor), a Landscape Character Assessment has been carried out as part of the development plan. This assessment divides the Fingal area into seven Landscape Character Areas (LCAs):

- Coastal Character Area
- Estuary Character Area
- River Valleys/Canal Character Area
- Airport and Swords Character Area
- High Lying Agricultural Character Area
- Low Lying Agricultural Character Area
- Rolling Hills with Tree Belts Character Area.

The proposed pipeline passes through the 'Low Lying Agricultural' and 'Airport and Swords' character areas. The 'Low Lying Agricultural Character Area' is defined as a mix of pasture and arable farming on level land or land with few views or prospects. Generally, it consists of large fields with few tree belts or large settlements. The more open character of the land combined with larger field patterns and low roadside hedges, makes it a more difficult landscape to find suitable sites for development. This open low lying landscape is characteristic of the Clonsaugh Road and Stockhole Lane area (Figure 16.12). High technology development is evident on the fringes of the DCC area in low lying land along the Northern Cross area (R139) (Figure 16.13). This area is also the preferred location of the Greater Dublin Area new wastewater treatment plant.



**Figure 16.10: Northern Cross (N32), looking west**



**Figure 16.11: Clonsaugh Road, looking north**

The Airport Character Area includes the lands surrounding the airport and the nearby town of Swords. The proximity of the airport and the development of the M1 and M50 motorways have resulted in the expansion of light industrial and warehouse activities in this area.

The proposed pipeline corridor crosses through the long-term car parking facilities for the airport. There are also a number of commercial units, the UAL/FAI Sports Centre and a limited number of one off residential dwellings in this area. Within the main airport campus, which is located on the eastern side of the airport lands, there are a number of terminal buildings, piers and car parks. Commercial buildings (Figure 16.14) such as hotels and car hire services are also located within the central area of the Main Airport Campus. The existing fuel farm and cargo areas are located on the southern and south-eastern portions of the campus, where the proposed pipeline will terminate.





**Figure 16.12: Airport Campus, viewed from Radisson Blu Hotel**

The primary land use adjoining the airport to the north, south and west is agricultural land consisting of grasslands together with arable land which are bounded by hedgerows and tree lines. The airport consists mainly of cultivated or disturbed land including a large proportion of airport-managed grassland.

Permission has been granted for the Metro North Scheme which includes a stop and a depot at Dardistown which is located south-west of the proposed pipeline corridor as it terminates at the airport tank farm.

#### 16.4.2 Existing Landscape Values

Values which are attributed to a landscape are:

- Aesthetic - most frequently visual, vistas, scenic areas, outstanding landscapes, areas of special amenity
- Socio-cultural - buildings, settlements, monuments, social history or social geography.

*(Department of Environment and Local Government, 2000)*

##### *Aesthetic Values*

Within the DCC functional area, aesthetic values are mainly reliant on the city's built heritage, the cities protected structures and architectural buildings which are discussed in detail in Chapter 15 (Archaeology, Architecture and Cultural Heritage). Due to the urban nature of the area, views and prospects are generally limited. No views and prospects are identified for preservation in the development plan.

The proposed pipeline corridor does not lie within any site that has been designated for nature conservation. It does, however, lie adjacent to a number of national and European designated sites located within Dublin Bay. Further details on these sites have been provided in Chapter 11 – Flora and Fauna.

The proposed pipeline corridor crosses a number of river and streams and while it does not traverse any public amenity areas it does run adjacent to amenity areas such as Fairview Park, Alfie Byrne Open Space, Darndale Park, Belcamp Park as well as several other small local parks. The DCC Development Plan *aims to protect amenity areas to encourage a sense of wellbeing and enhance the social and recreational life of the city's communities.* Such proposal include the development of a linear park along the banks of the River Tolka.



**Figure 16.13: Tolka River in vicinity of crossing, looking north**



**Figure 16.14: Santry River in vicinity of crossing, looking east**

In Fingal, highly sensitive landscapes have been identified in areas of the County of high landscape value. These are areas of low capacity to absorb new development. The nearest of these zoned areas is located approximately 2.5 km east of the northern section of the pipeline at Feltrim/Kinsaley.

This assessment also identified important views and prospects in the area. There are no views and prospects in close proximity to the proposed pipeline corridor, with the nearest located at the R106 Strand Road from Baldoyle to Portmarnock, which is approximately 4.5 km to the east.

The proposed pipeline corridor will cross the Mayne River within Fingal's jurisdiction at a point where it is culverted under the road. It is the Council's policy to maintain rivers and streams in an open semi-natural condition, wherever possible and ensure that river corridors and valleys are protected and maintained for their biodiversity and landscape values.

### *Socio-Cultural Values*

The development plan for each area aims to provide objectives for the protection, enhancement and management of the built heritage, to manage and control impacts to these monuments/structures so that they retain their significant historic character. DCC has designated nine ACA's within its jurisdiction, one of which is 180 m west of the proposed pipeline corridor - Marino Casino. Section 15 -Archaeology, Architecture and Cultural Heritage, discusses this aspect in detail.

## **16.5 Potential Visual and Landscape Impacts**

### 16.5.1 Construction Impacts

The proposed pipeline will give rise to temporary visual intrusion during the period of construction, causing a transitory negative impact upon the existing character of the area. This impact, although short term will be moderate - significant in the immediate vicinity, being apparent from adjacent residential, industrial, recreational/amenity, community facilities, road users and pedestrians. Where the pipeline crosses through open landscape areas, particularly in the area of Stockhole to the north of the pipeline corridor, visibility may be available from greater distances.

Landscape and visual impacts associated with the construction phase will largely be due to the erection of fencing around each working area, the excavation of the trench and installation of the pipeline. The landscape character will undergo a moderate change from the current state to a construction area with associated works such as fencing, plant and machinery etc. The duration for the construction works is programmed to be completed in 10 months with four crews working at any one time. Permanent re-instatement of the trench will be carried out shortly after the pipeline is installed. Therefore, the duration of the landscape and visual impacts, while moderate in places, will be short term.

Visual and landscape impacts at rivers and streams crossings will arise from the installation of launch and reception pits either side of the crossing. These will have a short term (2 - 4 weeks) negative visual impact. As the crossing of the river/streams will be completed using trenchless technology, this will maintain the watercourses in their natural condition.

The proposed pipeline corridor will be routed along the Alfie Byrne Road, adjacent to the Alfie Byrne Open Space and Fairview Park and to the north within the AUL/FAI Sports grounds, where the pipeline corridor is located between the pitches and some maintenance facilities. As the pipeline will be laid within the public road which passes between Alfie Byrne and Fairview Parks where visual amenity is currently impacted by traffic using these roads, the potential short term impact on users within these recreational areas will not be low - moderate.

### 16.5.2 Operational Impacts

As the pipeline will be laid below ground level and all surfaces will be re-instated once the pipeline is installed, there will be no permanent impact from the pipeline itself.

A control panel enclosure measuring 1,400 mm wide x 1,300 mm high x 300 mm deep for the two valves will be installed at the back of the footpath. Examples are provided in the Design Basis Report included in Appendix 3.2.

These will be located on the Malahide Road R107 (refer to Strip Map No 16 in Appendix 3.4 of Volume 3 of the EIS) and the Malahide Road R139 (refer to Strip Map No 33 in Appendix 3.4 of Volume 3 of the EIS).

Above Ground Stations required at both Dublin Port (inlet) and Dublin Airport (reception) will be located in existing industrial compounds.

In Dublin Port, the fuel will be transferred from the existing storage tanks to a pumping station. The proposed pipeline inlet station will consist of a new control building, 3 m high. Pumps, traps and pipe work located external to the building on bunded hardstanding. The facility will be secured by paladin fencing.



**Figure 16.15: Proposed Location of Inlet Station**

At Dublin Airport the pipeline reception station will be located adjacent to the existing loading and storage facilities and will include a new control building, (3 m high). Pipe work and meters will be located external to the building.



**Figure 16.16: Reception Station at Dublin Airport**

As both of these sites are located in areas which already have significant industrial structures and use, there will be no significant visual impacts from either of the stations.

In the event that a leak does occur, temporary visual impacts will arise if localised excavation is required.

### 16.5.3 Decommissioning Impacts

Given that there will be no excavation associated with the decommissioning or re-validation of the pipeline, there will be no landscape or visual impacts.

### 16.5.4 Do-Nothing Impact

If this proposed development does not proceed, the landscape and visual environment along the proposed route will continue to evolve along some sections of the route, in particular along the Malahide Road where commercial and retail development is occurring and to the north of the scheme where a preferred site for the Greater Dublin Area new wastewater treatment plant has been identified.

## **16.6 Mitigation Measures**

### 16.6.1 Construction

A number of measures for the mitigation of the potential visual impact from the proposed development have been introduced as part of the design of the overall scheme including the selection of a route which directly avoids designated areas, parks and amenities. In addition:

- Construction of the pipeline will be executed in working zones which will localise any temporary visual impacts to these areas
- Use of trenchless technology for all watercourse crossings while primarily for water quality reasons will also minimise impacts on the aesthetic value of the open channels of the Tolka and Santry Rivers
- It is expected that permanent re-instatement of the trench will be carried out shortly after the pipeline is installed.

### 16.6.2 Operation

As the pipeline will be located underground there are no requirements for mitigation measures during the operation of the proposed pipeline.

### 16.6.3 Decommissioning & Re-validation

As there will be no negative impacts arising from this phase of the scheme, no mitigation measures have been recommended.

### 16.6.4 Cumulative impact

As the proposed pipeline will be underground the potential for cumulative visual impacts will only arise if the construction of the pipeline coincides with another proposed development. Given that the pipeline will be constructed in sections, the cumulative impacts would be temporary and short-term in nature.

### 16.7 Predicted Impacts after Mitigation

During the construction period, the landscape in the immediate vicinity of the pipeline construction will be negatively impacted by visual intrusion. The implementation of the recommended mitigation measures will minimise the overall visual impact. However during the construction period visual impacts will be moderate. Following the complete reinstatement of the pipeline corridor, there will be no residual impacts.

### 16.8 References

- Department of Environment and Local Government, 2000, *Landscape and Landscape Assessment, Consultation Draft of Guidelines for Planning Authorities, June, 2000*
- The Landscape Institute - Institute of Environmental Assessment, 2002, *Guidelines for Landscape and Visual Impact Assessment, 2<sup>nd</sup> Edition, 2002.*