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RINGASKIDDY RESOURCE RECOVERY CENTRE

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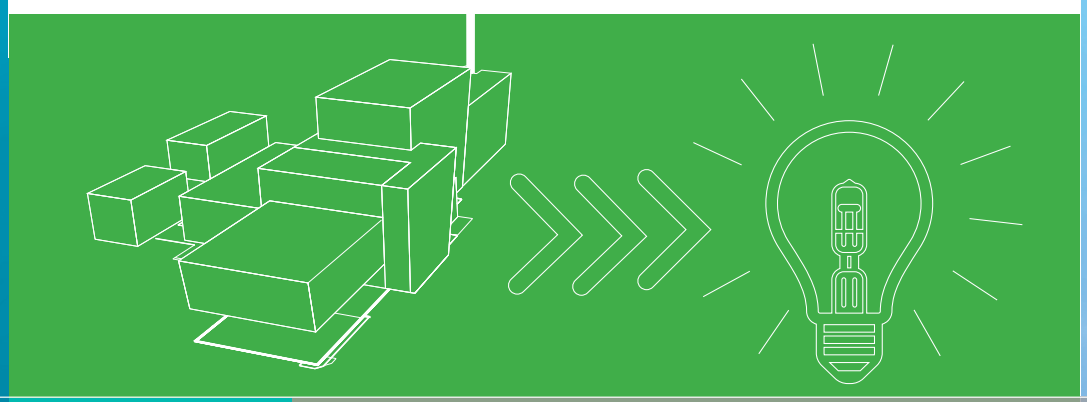

Landscape Design Report

ARUP

LANDSCAPE DESIGN REPORT

for

RINGASKIDDY RESOURCE RECOVERY CENTRE,

RINGASKIDDY,

CORK.

for

Indaver

Date: August 2025

2025 Update

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Contents Amendment Record

This report has been issued and amended as follows:

Issue	Revision	Description	Date	Prepared by	Checked by
01	00	Issue for Draft	Nov 2015	EMD	DB
02	00	Issue for Planning	Jan 2016	EMD	DB
03	00	2025 Update	Aug 2025	SC	DB

CONTENTS

1.0 INTRODUCTION

This landscape design report accompanies the landscape proposals submitted as part of the update to the original 2016 planning and EIS application for the proposed Ringaskiddy Resource Recovery Centre (referred to as the 'proposed development') in Cork's Lower Harbour area. Careful consideration has been given to the overall site layout, location of the building and landscape design of the surrounding site, which has been outlined below. A separate landscape and visual impact assessment report with accompanying photomontages has also been prepared and forms part of the Environmental Impact Statement for the proposed development.

This report should be read with the following associated landscape drawings;

Drawing number	Drawing Title	Scale	Size
6625-300	Overall Landscape Masterplan	1:1000	A1
6625_301	Landscape Masterplan	1:500	A1
6625_302	Landscape Sections	Varies	A1
6625_303	Landscape Cross Sections	1:1000	A1

2.0 SITE CONTEXT

The proposed development is located along the eastern edge of the Ringaskiddy Peninsula in Cork's Lower Harbour. Located just off the N28, the site is very accessible.

The overall site is approximately 13.55 hectares. The proposed development lies adjacent to the southern boundaries of the National College of Ireland Campus and iMERC (Irish Maritime and Energy Resource Cluster) Campus. Recent development such as the above campuses have potential to transform this location into an educational, innovation and energy hub within Cork

The Waste to Energy Facility will be located east of Hammond Lane, adjacent to Gobby Strand. This site has an unkempt character, with scrub covering most of the site. A strong tree line lies adjacent to local road and perimeter of the site and provides good screening. The prominent feature of the site is its topography. A strong ridgeline cuts along the southern façade of the site and creates a strong colourful backdrop from the L2545 access road.

The Ringaskiddy Martello Tower is an important historic element to the area and is located to the southwest of the proposed development on the top of the ridgeline. View lines to and from the tower have been an important consideration in determining the site layout and building form of the proposed development. Please refer to Figure 1 below.

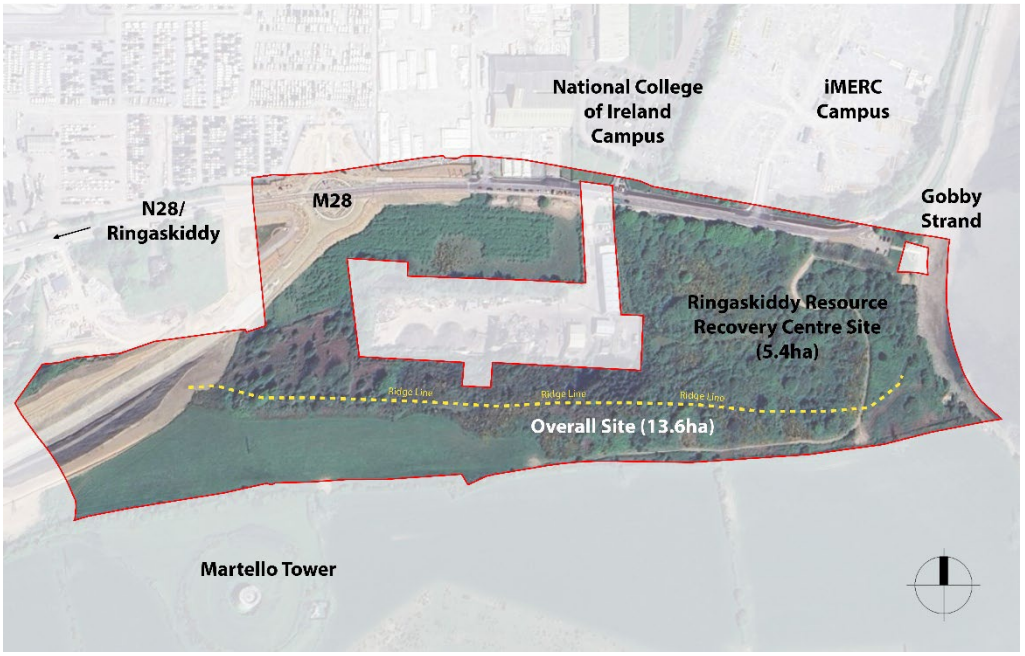


Figure 1. Site Context

3.0 SITE DESIGN

The Waste to Energy Facility comprises of a main process building (45m high), a stack (70m high), and number of smaller structures such as an administration building and ESB compound. Due to the scale of the proposed development a key design objective is to minimise the visual impacts of the facility on the character and views from the adjoining L2545 road, residential properties and public areas.

To reduce the visual impact of the main process building, it has been broken, orientated and set back into the site to reduce its height and visual mass. The ridgeline to the south provides a natural backdrop to this mass with building colours chosen to blend into this background landscape. Smaller units such as the admin building are located closer to the public road breaking up the overall mass of building form.

The proposed development aims to blend into the environment with the use of native and adaptive planting found in the surrounding environs. The Western Fields will be screened with native hedgerow planting that blends into the surrounding landscape.

Naturalistic planting to the southern and eastern perimeters of the Waste to Energy Facility site help blend the proposed development into its environs whilst creating a strong screen at eye level. The northern perimeter of this site lies opposite the iMERC campus and thus responds to accordingly in a campus style design. This comprises of mounded landform with native shrub/scrub planting in large drifts underneath semi-mature specimen pine planting. These semi mature Pines (*Pinus sylvestris)* trees form strong lines which help screen the proposed development and frame view out to the surrounding seascape which soften the building forms. A clipped hedgerow mix planted in front of the security fencing along the northern boundary of the site continuing a formal streetscape design which responds well to the adjacent campus landscapes. A green verge is provided for sight lines. Please refer to Figure 2 for reference.

The proposed development plans to enhance its immediate surrounds by upgrading the local road, provide coastal defence works at Gobby Strand and establish an amenity walkway and viewing platform from Gobby Strand to the Martello tower.

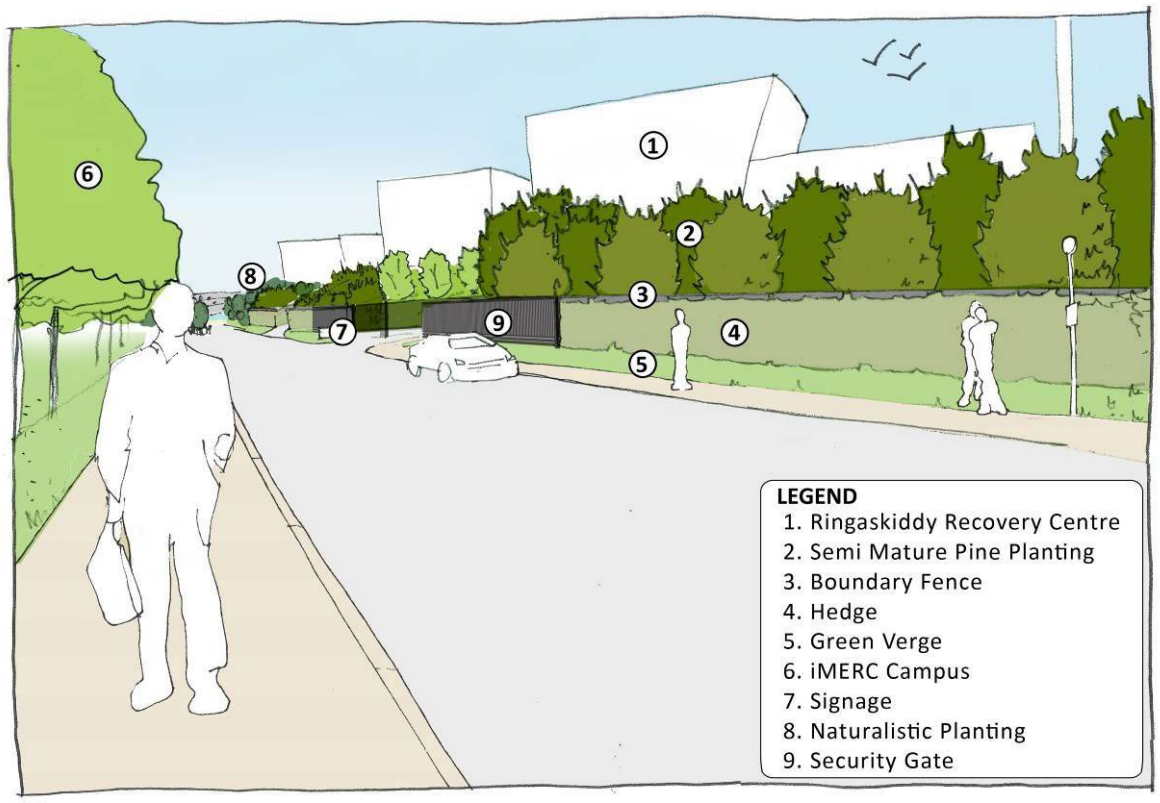


Figure 2. Sketch of Waste to Energy Facility Entrance

4.0 LANDSCAPE DEVELOPMENT

The landscape objectives of the site are as follows;

- The creation of a quality, 'campus' style landscape which will be an appropriate scale and setting for the buildings within the site.
- The visual integration of the proposed development with the surrounding landscape.
- The provision of an element of landscaped screening between the proposed buildings and surrounding landscape.
- The creation of landforms and mounding with a natural appearance avoiding overly engineered embankments.
- Providing an amenity walkway linking Gobby Strand to the Martello Tower. Provision for a viewing area and walkway entrance.

The landscape development of the site will be predominately native species, a high percentage of which will be advanced nursery size.

A number of existing elements of the site and surrounding landscape have been identified that are important to the overall landscape strategy. They include;

1. The location of the Martello tower in close proximity to the site boundary which will have localised views into the site and is an important visual feature of the surrounding area. Building and planting placement and orientation have been place so as to retain and protect any views to and from the tower.

2. The coastal location has been considered in the chosen planting species.

3. The height and steeply sloping shape of the Ringaskiddy ridgeline including the dark colours of the landmass and the existing planting against the lighter colours of the sky and sea. Thus, informing proposed planting and building colours.

4. The location of the iMERC and NMCI Campuses adjacent to the northern boundary of the site prompts a landscape treatment which responds to this campus landscape.

5. The proximity of the public road L2545 to the north of the site. Vehicle and pedestrian users will view the proposed development from this road and hence the northern landscape treatment shall utilise mounding and tree planting to guide views from this road away from the proposed development.

6. A new publicly accessible amenity path will be established from the Gobby Strand beach to the Martello tower

7. Coastal defence works are to be implemented so as to reduce the current rate of erosion of the existing eastern boundary of the site.

One of the primary aims of the landscape design is to integrate the proposed development into the surrounding landscape. This is achieved by capitalising on existing landscape elements such as the existing ridgeline, trees and landform and use of predominantly native and semi- native trees which are found in the local area and by providing visual screening where appropriate.

The overall landscape vision of the site centres on two complementary principles, the retention and augmentation of existing landscape features while also effectively integrating the proposed development into the surrounding landscape. Tree and shrub species will be chosen to complement existing vegetation which will not only ensure viability but also enhance ecological value. In areas such as the car park and entrance of the site ornamental species will be introduced. Landform and mounding will become important landscape elements throughout the site in combination with tree and shrub planting. Thus, creating an important screening element on site boundaries and ensure that excess earthworks material will be retained on site.

The landscape and external works design have been prepared by a qualified landscape

architect who will also supervise the implementation of all the works. Construction contracts will be structured where possible so as to allow the early completion of landscape areas facilitating the establishment of planting and the establishment of the overall site.

Any temporary or permanent landscaping, planting or seeding damaged or disturbed in any manner on the site will be fully and promptly reinstated. Any failures in planting will be replaced in the next planting season, with the objective of 100% canopy cover of the ground within 5 years of planting. A landscape management plan will be prepared for the site. Its aim will be to provide an attractive site in a sustainable manner.

Figure 3. Landscape Plan of Waste to Energy Facility Site (refer to drg. 6625_301)

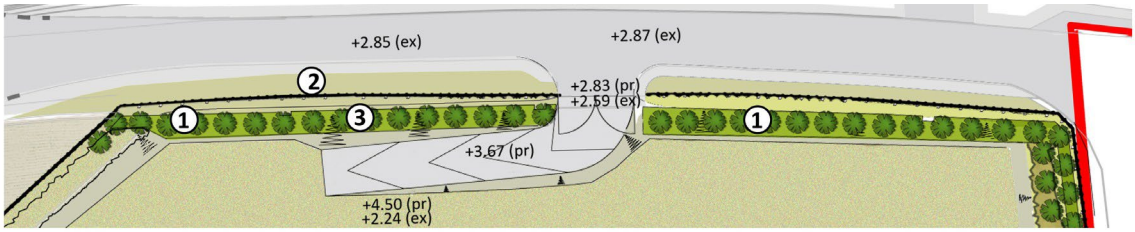
Biodiversity Enhancements

There will be removal of an area of habitat including scrub/immature woodland and remnants of semi-natural grassland, however, hedgerows and areas of semi-natural vegetation outside the proposed works area will be retained and the biodiversity value of grassland in the northwest corner of the site will be increased by allowing this area to naturally recolonise, providing no net loss in this area of the site. Additional native planting will also be carried out along the boundary of the proposed development site.

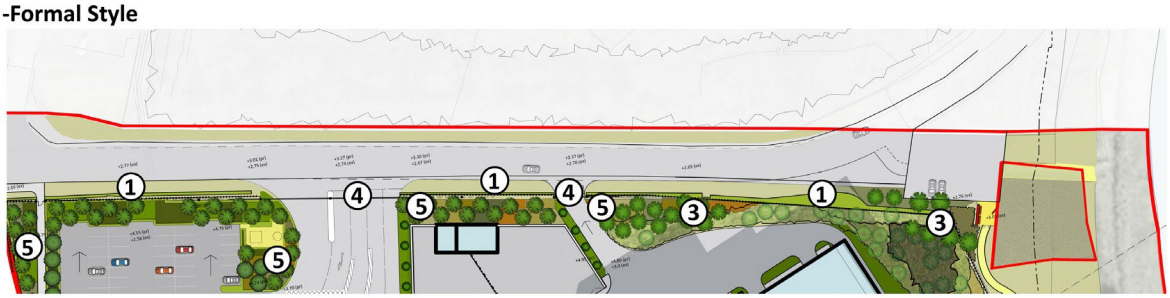
Bat boxes, swift boxes, insect hotels, butterfly banks and loggeries will be integrated in the design of the proposed development, and these biodiversity enhancement measures will be maintained and managed through the operational phase of the proposed development.

4.2.1 Boundary Treatment

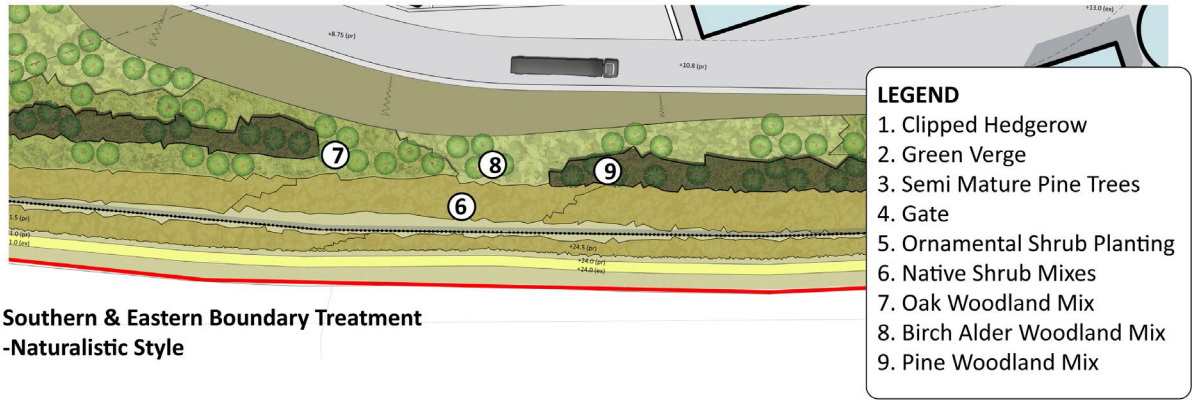
The western fields will be elevated in height and it is proposed to have clipped native hedgerow planting along the slope of this site to screen the fields from the roadside. Pine planting through this hedgerow begins the formal planting language, which continues into the northern boundary treatment. A matt black mesh fence secures the boundary perimeter as per the engineer's details. A green verge is kept at the entrance of the western fields to preserve sight lines to the site. Please refer to drawing 600_300 for further information.



Western Fields Boundary Treatment
-Formal Style



Northern Boundary Treatment
-Formal Campus Style



Southern & Eastern Boundary Treatment
-Naturalistic Style

Figure 4. Zoom In of Boundary Treatments

The northern boundary of the site is formal in character due to the adjacent & evolving campus developments (National Maritime College of Ireland and iMERC campus), the L2545 and its purpose as the entrance to Rocky and Haulbowline islands. A matt black 2.4m high paladin mesh fence will create a secure boundary perimeter. A clipped hedgerow will be planted in front of the fence to provide a vegetated screen to the fence. Semi mature Pine and woodland screen planting inside the fence will create a strong and immediate screen at eye level. (Please refer to figure 2, figure 4 and drawings 6124-300/301/303).

Along the eastern and southern perimeter of the site this fence will continue. Specified shrub mixes and tree planting will be planted on 1-2m high earth berms running adjacent the perimeter fence and amenity walkway will create a strong overall screen to the proposed development whilst retaining a natural form and creating diverse habitats. The western boundary remains intact with retention of the existing perimeter fence. Proposed boundary fencing shall link with this existing fence where needed so as to create a solid and secure perimeter to the site.

4.2.2 Car Parking Areas

Car parking will be screened by semi-mature Pine tree, woodland and shrub planting. Parking will be screened from L2545 as far as possible with shrub and tree planting. Landscaping around the car parks and main entrance will include densely planted low shrubs. These will primarily native/pollinator friendly but also hardy and salt tolerant. Semi mature Pine planting running along the northern perimeter screen parking whilst Alder (*Alnus cordata)* will be planted as a transition to the administration building create a defined space. Shrubs and ground cover will be provided in the required landscape areas. Shrubs will be planted at a general density of 3-4/sq.m. of landscaped area. Ground cover must be selected and planted so as to provide 90% coverage within three years of planting.

Species will include;

- *Viburnus opulus*
- *Ilex aquifolium*
- *Ligustrum vulgare*
- *Hedera helix*
- *Dyropteris felix-mas*

Planting beds will be mulched with a 75mm layer of fine, well composted bark mulch. All car parking will be edged with a 150mm, cast insitu concrete kerb. Access roads to carparks etc within the site are to be asphalt on tar macadam with in-situ concrete kerbs.

Figure 5. Zoom In of Admin Building Car Park

4.2.3 Pedestrian Links

A pedestrian link from the entrance of the site through to the car park and administration building is to be provided at a 1/12 slope with a platform every 4.5m. A low wall retains landscape mounds holding drifts of native shrub and pollinator friendly planting species. Semi mature Pine trees planted above these provide the needed screen from the local road to the car park.

An amenity footpath will be provided to link Gobby Strand car park and the Martello Tower. The footpath will be 1.8m wide and constructed in bitumen macadam. A 1m green verge will be kept either side of the walkway to allow for vehicular access. Removable bollards located at the entrance of the walkway facilitate vehicular access. Seating and signage are to be established at this entrance so as to provide an added amenity to the area. Native shrub mixes placed on landscape berms parallel to the walkway screen the overall Ringaskiddy Resource Recovery Centre at eye level whilst expansive open harbour views can be seen through the native grassland/scrub landscape.

1m high feature walls made from recycled materials will frame the walkway and guide the pedestrian eye out to the lower harbour. A viewing platform utilising the materials of the above walls is raised at the peak of this walkway and an attractive vantage point for the public to enjoy the panoramic expanse of these views. Please refer to Figure 6 and dwg.

6124_301.

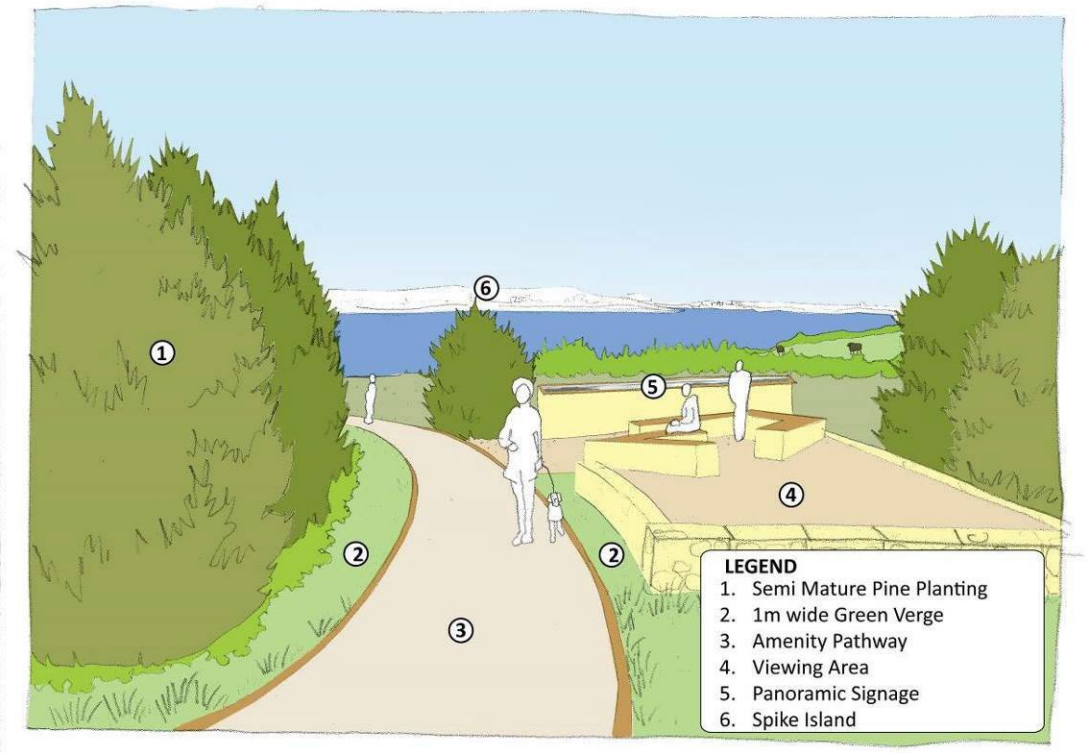


Figure 6. Sketch of Viewing Area on Amenity Walkway

5.0 SUGGESTED SPECIES LIST

Tree Planting
Pinus sylvestris
Quercus petraea
Quercus robor
Alnus glutinosa

Tree Transplants
Pinus sylvestris
Quercus petraea
Quercus robor
Alnus glutinosa
Betula pendula
Ilex aquilfolium
Prunus spinosa

Scrub/Shrub Mix 1
Crataegus monogyna
Prunus spinosa
Coryylus avellana
Sambucus nigra

Shrub Mix 2
Corylus avellana
Ilex aquifolium
Salix caprea
Euonymus europeus
Ligustrum vulgare
Viburnum opulus

Shrubs & Groundcover
Viburnum opulus
Euonymus europeus
Ilex aquifolium
Cornus sanguinea
Dyropteris felix-mas

Formal Hedgerows
Taxus baccata
Ilex aquifolium
Ligustrum vulgare
Crataegus monogyna

5.1 Woodland Planting

The woodland areas will consist of natural drifts and interlocking blocks of woodland planting which will accentuate the proposed mounded landform. The woodland mixes will be used around the southern and eastern perimeters of the site. These shall include:

- **Pine (*Pinus sylvestris*)** for year-round screening and to retain the dark green backdrop which is existing in the area.

- **Oak (*Quercus petraea* and *Quercus robur*) woodland** with a small percentage of Birch (*Betula pendula*) and Alder (*Alnus glutinosa*). The Oak is predominantly a climax species. '*Climax*' tree species is the ecological term used to describe the mature native trees in woodlands within Ireland such as Oak, Ash and Pine.

- **Birch (*Betula pendula*) and Alder (*Alnus glutinosa*) mix** with Holly (*Ilex aquifolium*) and Prunus (*Prunus spinosa*). These are predominantly '*nurse*' or '*pioneer*' species and are hardy native and semi-native trees which are tolerant of disturbed soil conditions, wind and salt exposure and low soil fertility.

Planting generally will be established through accepted landscape and forestry planting techniques, i.e. '*bare root transplants*', '*whips*' and '*feathered trees*', planted at 1.5m centres, which adapt readily to disturbed ground conditions. These plantings will be supplemented by a proportion of larger semi-mature trees to the highest areas of the proposed landforms. Woodland edge planting will be used at the edge of the plantings for protection and to increase diversity, density and visual interest. This planting will occur during the first planting season (November – March) after all of the construction works have been completed.

Woodland Planting Reference Images

Pinus sylvestris

Pinus nigra

Quercus petrea

Quercus robur

Betula pendula

Alnus glutinosa

Ilex aquifolium

Prunus spinosa

5.2 Shrub Planting

Two shrub mixes are specified for added biodiversity on site. These consist of a hardy native evergreen & deciduous mix that will provide seasonal change in terms of colour, form and texture. The species have been chosen to work well within the context of the site and help the perimeters blend into the landscape. The existing, decommissioned underground gas transmission line within the site will be removed and planted with native planting.

The shrub mixes consist of:

- **Shrub mix 1:** This is a native and naturalised shrub mix that will thrive in the site environment. The trees include Hawthorn (*Crataegus monogyna*), Blackthorn (*Prunus spinosa*), Hazel (*Corylus avellana*) and Elder (*Sambucus nigra)*.

- **Shrub mix 2:** This is shrub/scrub mix that will help to act as a windbreak and create biodiverse microclimates. The trees/shrubs include Hazel (*Corylus avellana*), hawthorn (*Crataegus monogyna),* holly (*Ilex aquifolium*), privet (*Ligustrum vulgare)* and Guelder Rose (*Viburnum opulus)*.

Along the northern boundary of the site adjoining the Ringaskiddy/Haulbowline (L2545) road, mix 2 will be used with Pine and Oak tree planting, providing a mix of native evergreen/deciduous screen planting.

Shrub Reference Images

Crataegus monogyna

Prunus spinosa

Corylus avellana

Viburnum opulus

Euonymus europeus

Dryopteris filix mas

Cornus sanguinea