KILSHANE POWER PLANT SID, CO. DUBLIN

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Landscape Architects & Consultants

GREEN INFRASTRUCTURE PLAN

Client: Kilshane Energy Ltd

Nov 2025

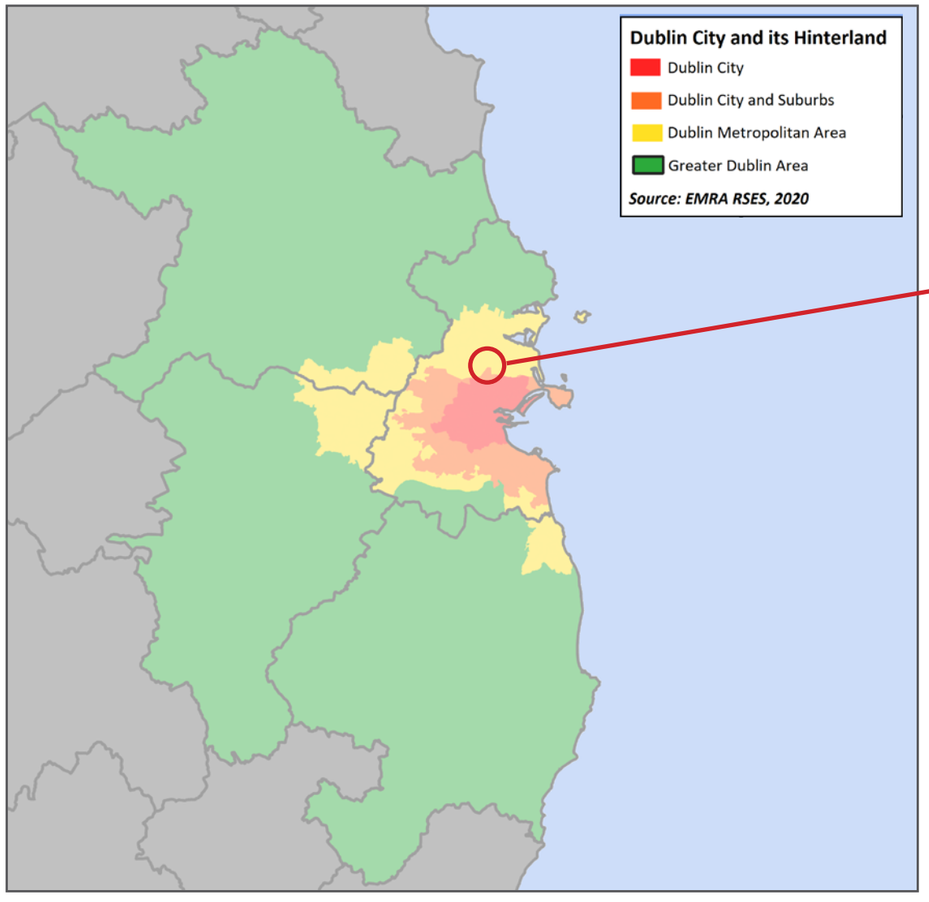
CONTENTS

1. SITE CONTEXT AND ANALYSIS

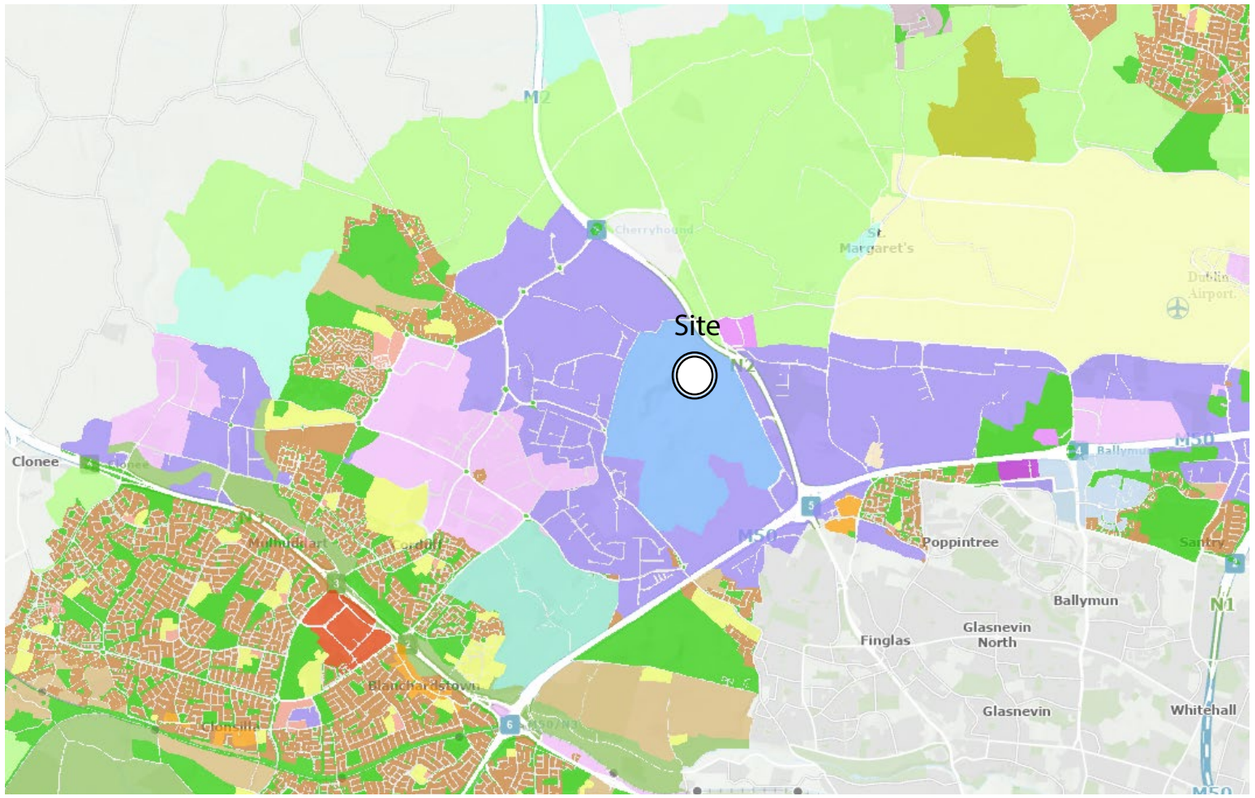
The proposed development site is located on the southern side of the L3120 Kilshane Road, in north County Dublin.

The site fronts onto Kilshane Road, a local connector linking the N2 to a network of rural and suburban roads serving the surrounding industrial, commercial, and agricultural lands. The N2 lies to the west, providing direct access to Dublin city and regional destinations.

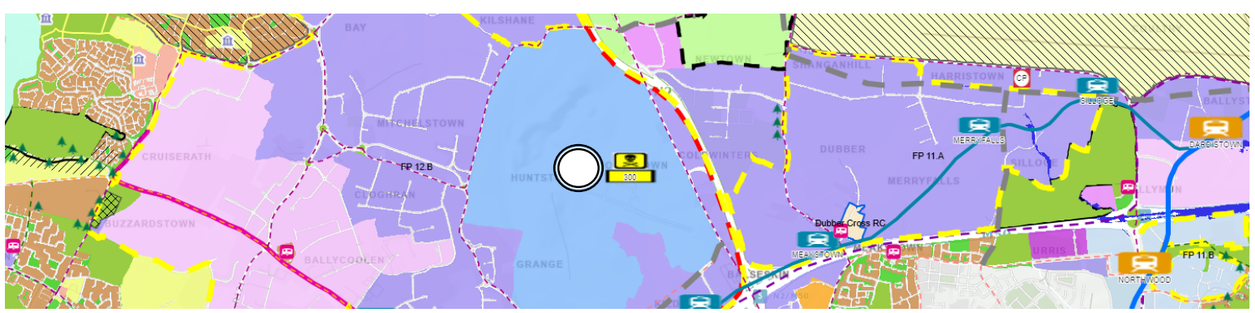
The immediate surroundings are characterised by a mix of light industrial facilities, open agricultural fields, and green spaces. To the east lies Dublin Airport. The site occupies a transitional zone between rural landscape and established industrial estates, forming part of the wider suburban fringe of Dublin.

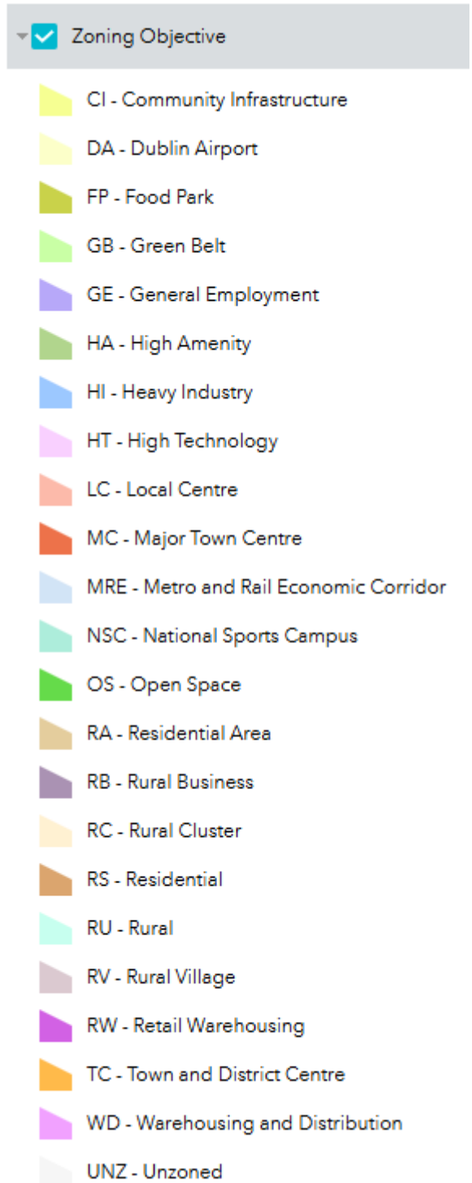


Zoning

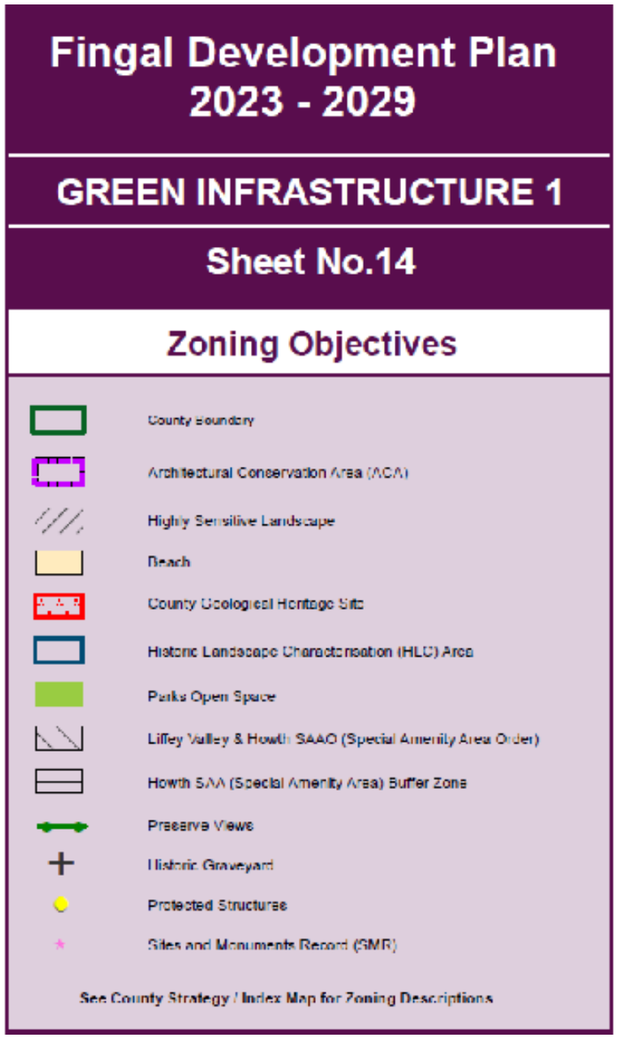


The site is located within a strong ecological Network comprising of open spaces and agricultural land.





Seveso Site



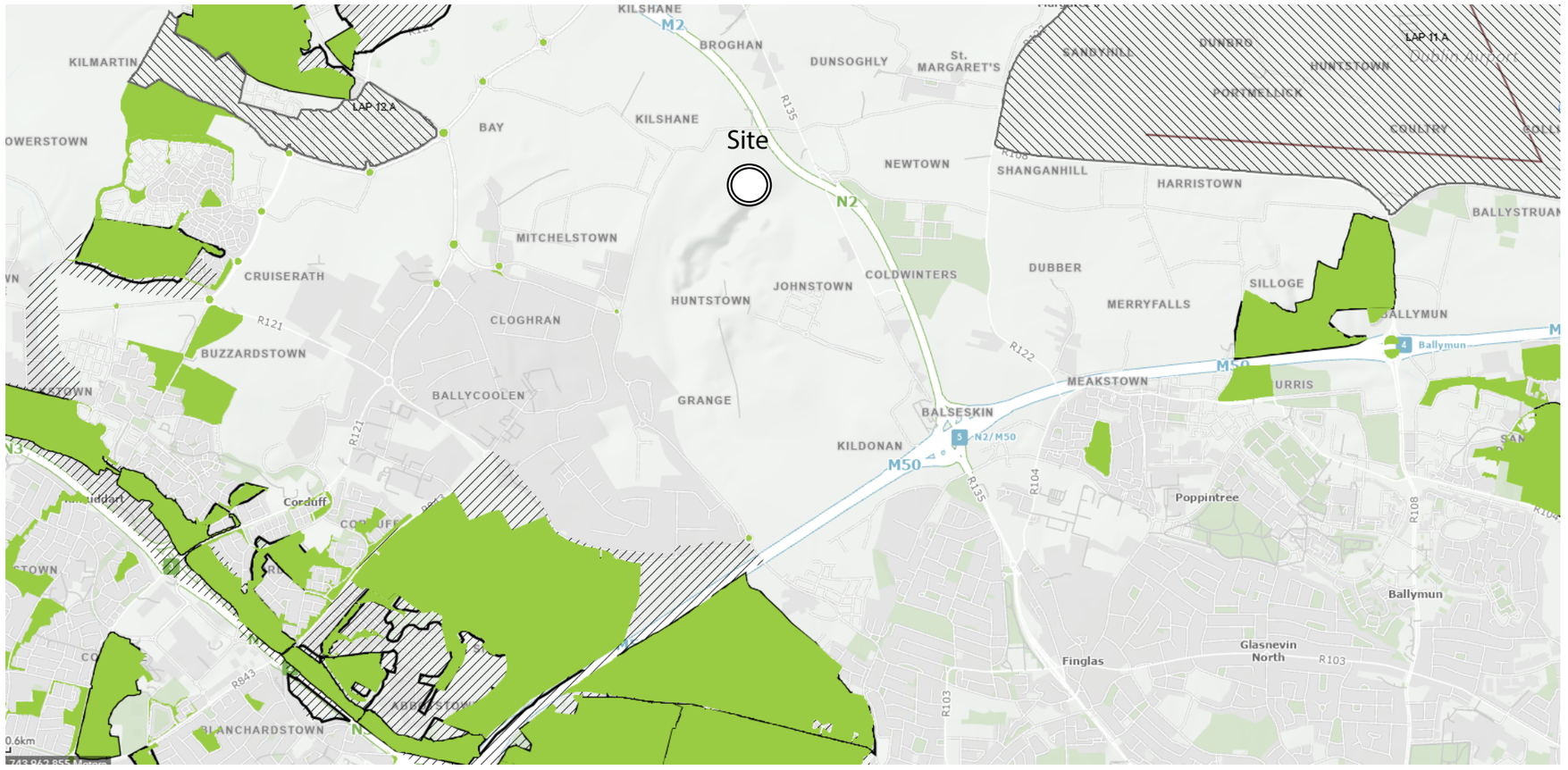
Approx. Site Location

GI OVERVIEW

Existing GI

We have provided a comprehensive landscape design combining all GI elements; Biodiversity, Sustainable Water Management and Provision of Open Space Amenities to create a unique environment.

These elements combine to create a robust Green Infrastructure response which builds upon the site's existing natural assets and offers increased value in terms of biodiversity enhancement & public amenity.



- Local Area Plans
- GIM 1 Proposed Open Space
- GIM 1 Highly Sensitive Landscape
- GIM 2 Parks Biodiversity Nature Dvelopment Areas
- Approx Site Boundary
- Approx. Site Location

GI OVERVIEW

Design Principles

Hedges

Open Spaces/Fields

Links - between new and existing green infrastructure

Approx Site Boundary

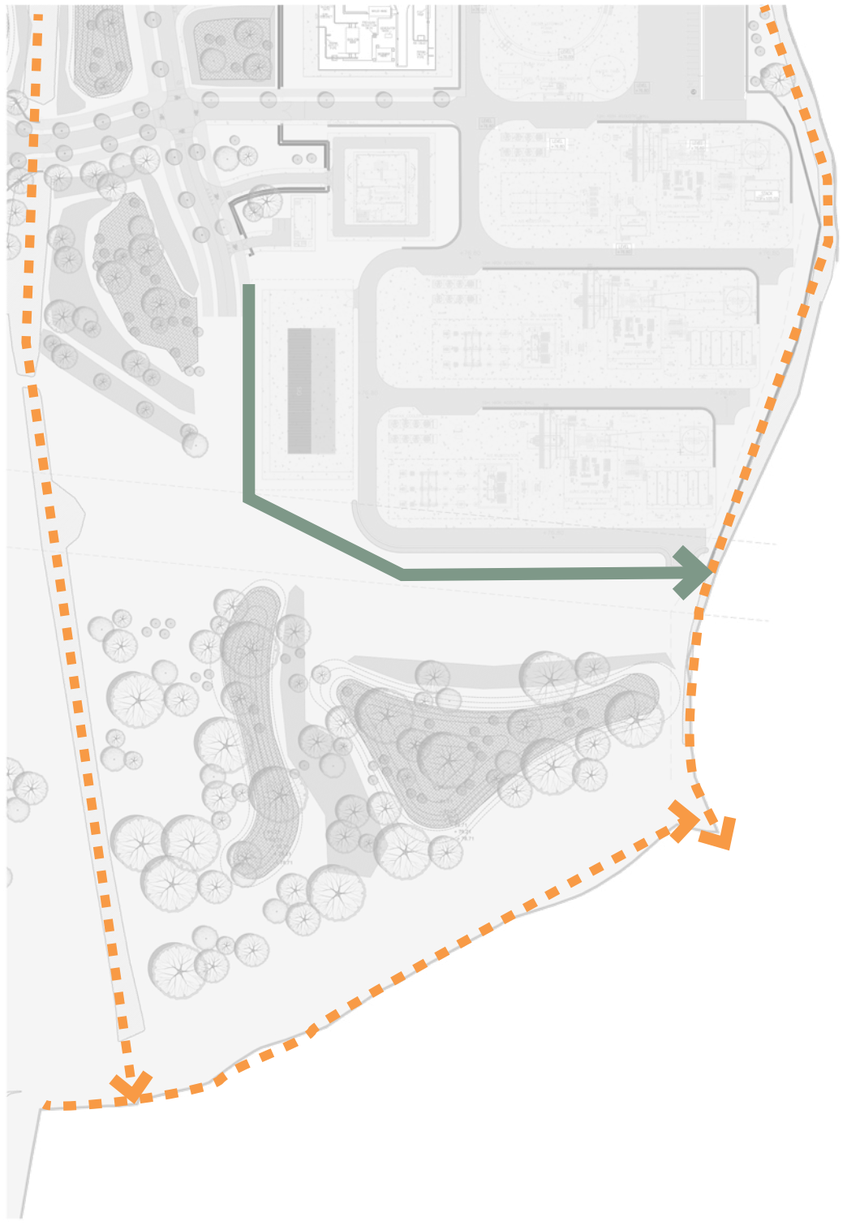
Design Principles

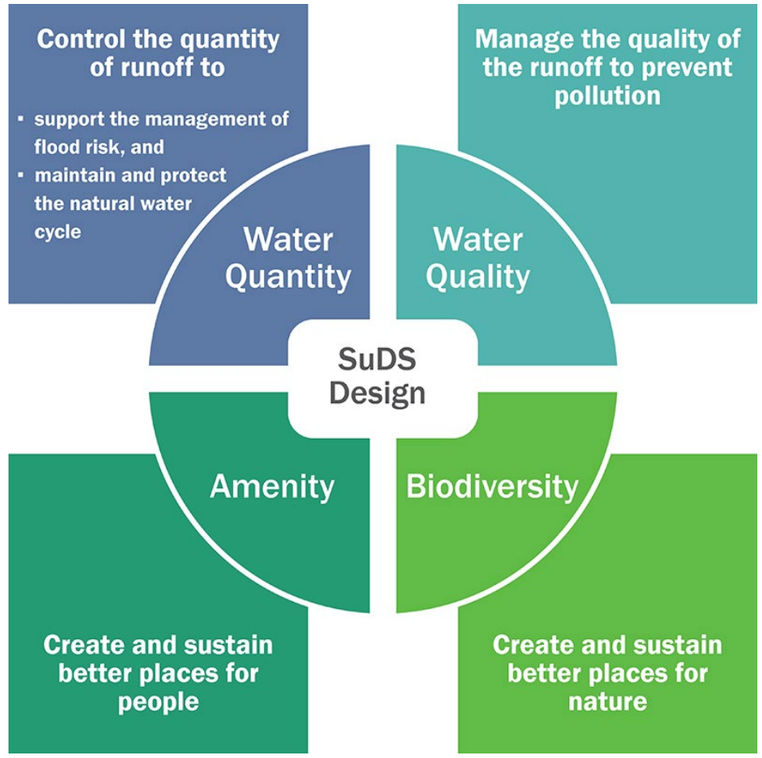
The use of nature-based solutions, alongside traditional drainage, in our roads and streets is particularly important with the multiple benefits that it provides, such as:

• Improving water quality in our receiving water bodies thus benefiting human, marine and aquatic health,
• Protecting groundwater recharge,
• Improved road safety through landscape interventions,
• Creating a high-quality public realm,
• Reduced flood risk, water channel erosion and overflows in our drainage and sewer systems,
• Creating more sustainable and climate adaptive urban neighbourhoods,

• Increased biodiversity,
• Provision of shade and reducing the "heat island" effect,
• Reduction of noise pollution,
• Improved air quality,
• Enhanced visual amenity
• Lessening the negative impacts of urban development on the natural environment,
• Potential for lowering capital and operating costs associated with development.

-Advice Note 5 Road and Street Drainage using Nature Based Solutions - Design Manual for Urban Roads and Streets
DMURS Manual 2023





Proposed Primary GI Conectivity Route

Retained GI Route

3. GI POLICIES

Main Themes

Biodiversity

It is proposed to retain existing vegetation and plant native hedges to promote ecological and biodiversity for the development. It is then recommended to augment this existing vegetation with new native hedges and wildflower mix, bolstering the ecological grounding and biodiversity of the site.

Additional native hedges are proposed to connect to existing vegetation in a wider context. In grassed areas and detention basins, wildflower mixes are being introduced to increase the range and species present on site. Therefore, appropriate additional habitats are being introduced to the site area which will both preserve and contribute to the existing ecological networks and overall biodiversity value of the subject site.

However, a management plan shall be implemented, while consenting local biodiversity through retention and native planting. However, hedgerow, trees and grass areas shall be regularly pruned and cut back to avoid/reduce roosting areas in trees, hedgerows and in open grass, detention areas. There shall be no standing water.

Sustainable Water Management

Please see the Engineers drawings for their SUDS interventions, natural SUDS measures have been introduced where appropriate as part of the proposed development.

Swales are grassed channels proposed to run along the south of the site. The roads, footpaths and cycle lanes in these areas will be linked to the swales, and rainfall from these surfaces may then be percolated to the soil. Grassed swales also enhance surface water runoff quality as the blades of grass slow down water flow, allowing suspended particles to filter and settle out of suspension. The swales will be connected to the surface water network so that any excess flows can be directed to the mains rather than overspilling to open spaces on the site.

Landscape

The proposed development has been designed to be integrated sensitively into a high quality landscaped environment.
The overall character of the landscape shall be naturalised with a range of habitats, hedgerow and grassland. This will add to the green infrastructure of the local area and shall feed into the existing hedgerows and trees surrounding the proposal.

GREEN INFRASTRUCTURE OBJ.

Polidy GINHP1

Response to Green Infrastructure Objectives in Fingal Development Plan 2023 - 2029

Policy GINHP1 – Resilient Design

Promote an awareness of the benefits of Resilient Design and the multi-functional nature of Green Infrastructure. Apply principles of Green Infrastructure to inform the development management process in terms of design and layout of new residential areas, business/industrial development and other significant projects while maximizing the multi-functional nature of Green Infrastructure by ensuring the development of synergies between Public Open Space, Biodiversity, SuDS/Water Sensitive Design and Active Travel objectives.

Response

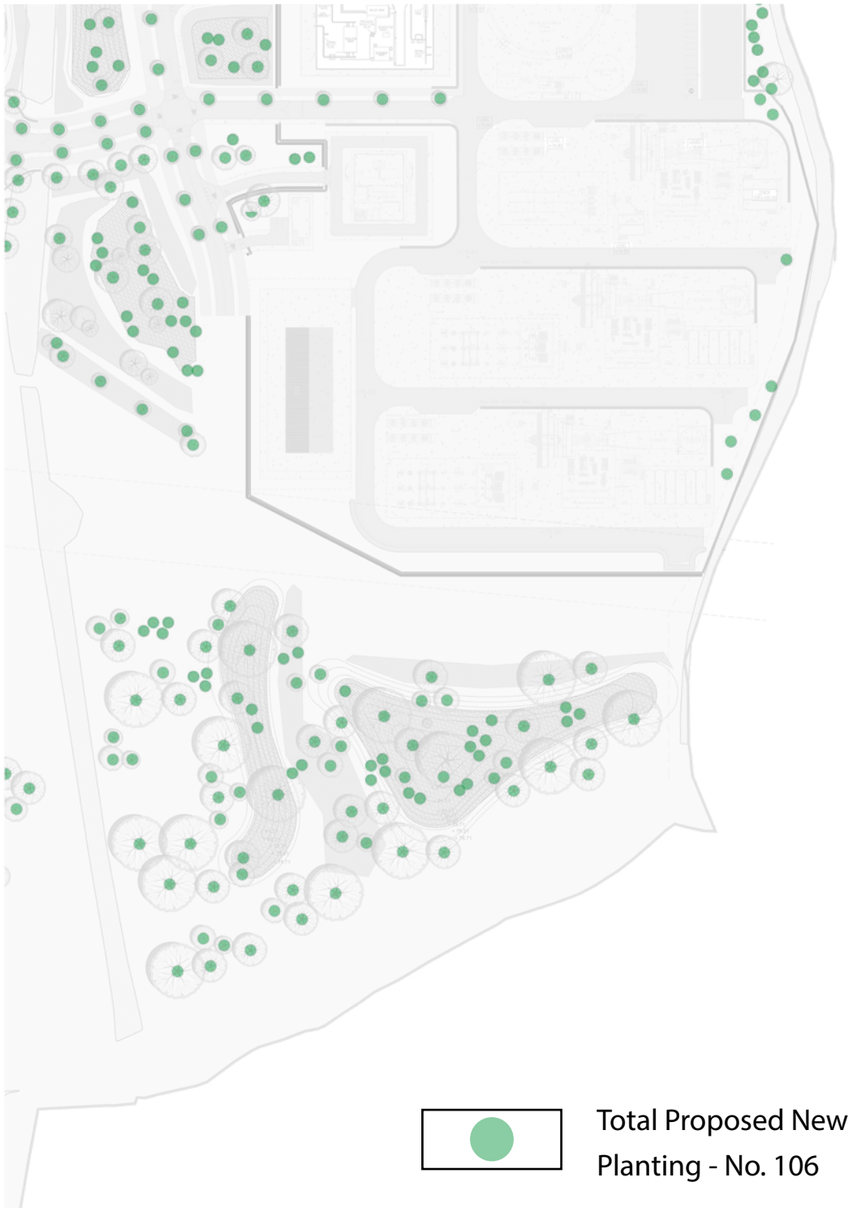
Our design integrates Green Infrastructure as a fundamental framework, shaping the layout and functionality of the development:

Biodiversity:
Native vegetation and pollinator-friendly planting schemes have been utilized throughout the site while respecting the safety requirements of the aviation authority in terms of roosting and foraging for birds.

Sustainable Drainage Systems (SuDS) /
Water-Sensitive Design:
The design incorporates bioswales. These features are designed to mitigate flooding,
improve water quality, and create opportunities for biodiversity.

Adaptable Design:
The project is designed to evolve with changing climate conditions, ensuring long-term functionality.

PROPOSED TREES



Native Hedgerows functionally create habitat links throughout the site which would be beneficial for commuting and foraging for animal specieS

GREEN INFRASTRUCTURE OBJ.

Polidy GINHP1

Response to Green Infrastructure Objectives in Fingal Development Plan 2023 - 2029

Policy GINHP10 –
Green Infrastructure and Development :

Seek a net gain in Green Infrastructure through the protection and enhancement of existing assets, through the provision of new Green Infrastructure as an integral part of the planning process, and by taking forward priority projects including those indicated on the Development Plan Green Infrastructure maps during the lifetime of the Development Plan.

Response

Our design fully aligns with Policy GINHP10 by seeking a net gain in Green Infrastructure through the following measures:

Protection and Enhancement of Existing Assets:
Preservation of Natural Features: Existing trees, hedgerows, and waterways have been carefully integrated into the design, ensuring their protection and enhancement. Buffer zones have been created around these features to safeguard their ecological value.

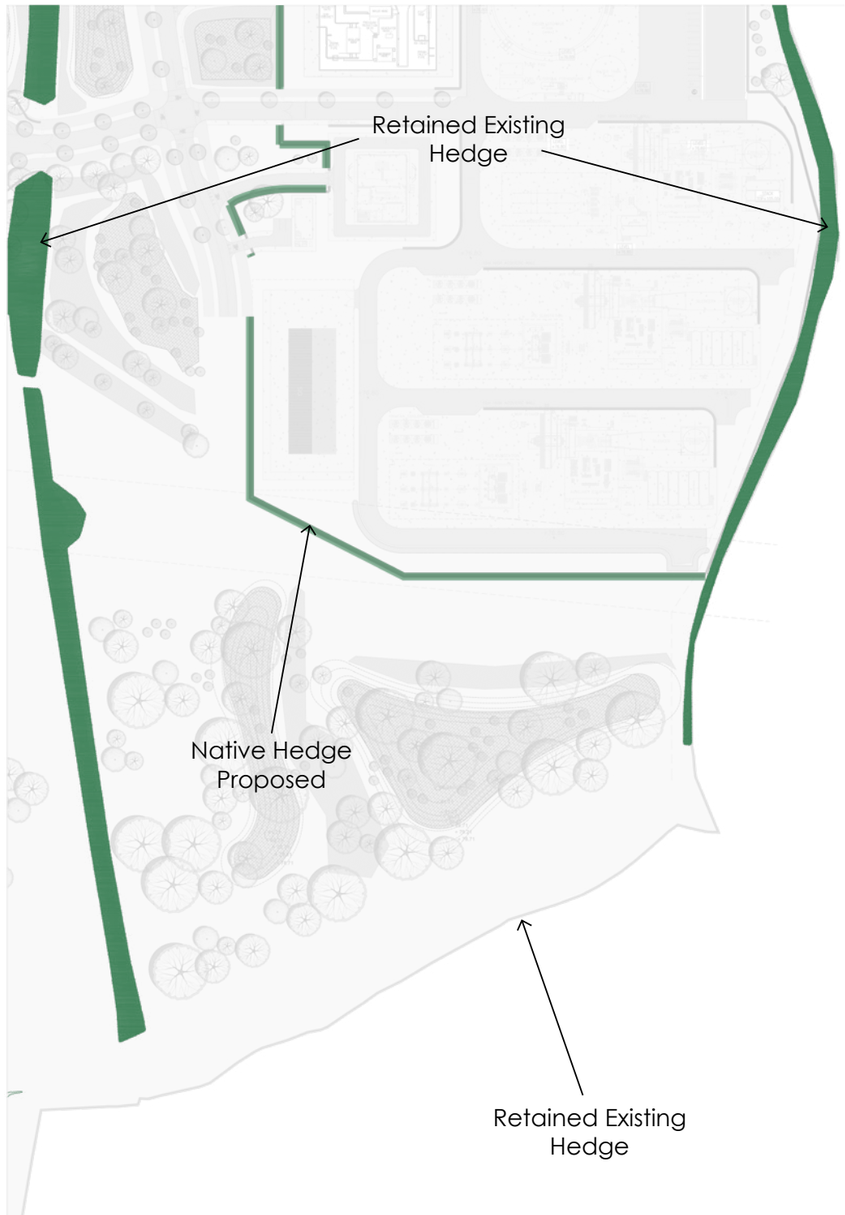
Enhancement of Ecosystem Services:
We have improved existing habitats with native planting, and biodiversity-focused management practices, supporting pollinators.

Integration with the Planning Process:
Green Infrastructure has been a guiding principle from the concept stage, ensuring seamless integration into the broader development layout.

Alignment with Development Plan Green Infrastructure Maps:
Our proposal directly addresses priority projects outlined in the Development Plan. Specific features, have been positioned to align with identified green infrastructure opportunities.

Collaborative Approach:
Partnerships with local authorities, stakeholders and aviation authorities ensure our design supports long-term objectives, contributing to the Green Infrastructure network at a regional scale while respecting the safety concern beside air plane traffic.

RETAIN & PROPOSED HEDGEROWS



Native Hedgerows functionally create habitat links throughout the site which would be beneficial for commuting and foraging for animal specieS

Fingal Development Plan 2023-2029

Objectives of the Fingal Development Plan 2023-2029 relating to Hollystown Residential Development:

Objective DMSO127 – Use of Native Species in New Developments
Require the use of native species where appropriate in new developments in consultation with the Council.

Objective DMSO129 – Tree Selection
Consider in tree selection the available rooting area and proximity to dwellings or business premises particularly regarding shading of buildings and gardens.

Objective DMSO130 – Planting of Large Canopy Trees –
Promote the planting of large canopy trees on public open space and where necessary provide for constructed tree pits as part of the landscape specification.

Objective DMSO131 – Street tree Planting Plans -
Street tree planting plans shall accompany developments over 50 units. Constructed tree pits will be required where trees are planted in hard surfaces and grass verges less than 1.2m wide. These plans will include the location of each constructed tree pit of a minimum rooting volume of 16 cubic metres, lamp standards and underground services. The location of tree planting in proximity to built features including footpaths must refer to BS5837:2012 Trees in relation to design, demolition and construction – Recommendations The width of grass verges where tree planting is proposed must be labelled on landscape plans.

Objective DMSO134 – Planting along Distributor Roads
Ensure new Distributor Roads or similar provide for grass verges of a minimum width of 2.4 metres to allow for avenue tree planting and where necessary provide for constructed tree pits as part of the landscape specification. Road verges shall be a minimum of 1.2 metres wide at locations where small canopy trees are proposed.

Objective DMSO133 – Location of new Trees
Where new trees are being planted, these will be located so they do not cause future interference to streetlights, typically trees shall be located so there is a distance of no less than 7m from the centre of the main stem to the lighting pole.

Objective DMSO137 – Replacement of Removed Trees
Ensure trees removed from residential areas are replaced, where appropriate, within the first planting season following substantial completion of construction works.

Response

DMS0127 - We have incorporated native trees into our planting scheme
DMS0129 - We have incorporated root barriers / protection into our scheme
DMS0130 - We have incorporated large canopy trees into our planting scheme
DMS0131 - We have a strong street tree design in our planting scheme. Constructed and utilised between car spaces
DMS0134 - Ample street trees have been provided on all road types with grass verges that provide sufficient space for a tree to fully establish.
DMS0133 - We have a considered street lighting through the design and have kept trees away from lighting. - approx 7m from light stand
DMS0137 - We have incorporated our design to replace removed trees and enhance the space with lots more proposed than existing

4. GI DESIGN

The landscape design will provide for the following;

1. Support an increase in species and new habitats in and around the new Development.
2. Provide a range of habitat areas and keeping with existing ecological areas.
3. Be equipped to cope with the effects of climate change and weather events, this includes the integration of Suds into the landscape design, swales and tree pits.
4. The landscape design has been developed to fit into the landscape setting and the surrounding context.

The proposed landscape design seeks to use native landscape materials in a high development low impact way, i.e. the use of natural materials, planting (native pollinator) to achieve a sustainable landscape that will increase the range of species and or improve the existing landscape habitat on site. The sustainable nature of the design requires it to be used by both nature and people, based on the following principles;

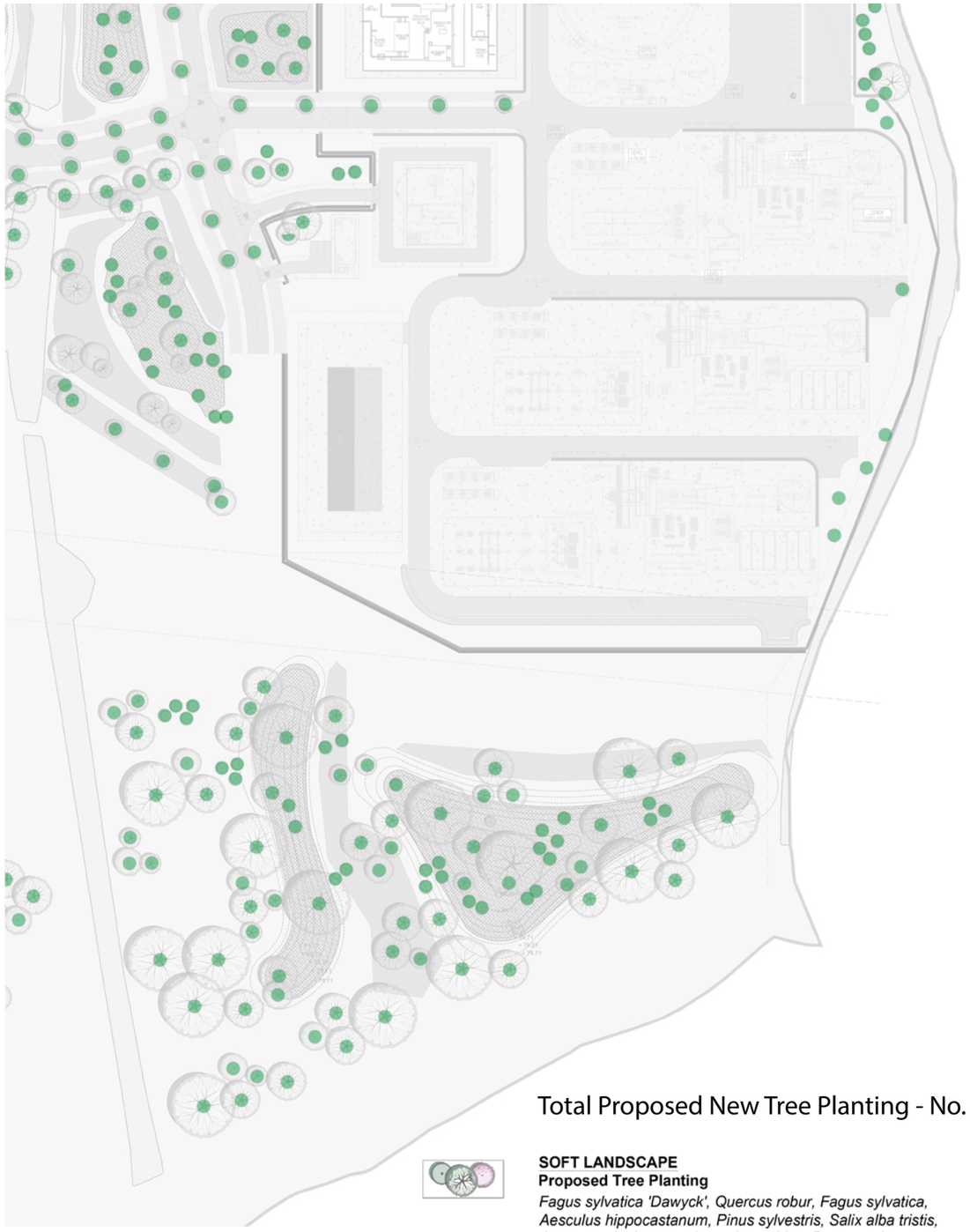
1. Connectivity – A well-connected green space network that can serve both humans – amenity and nature – biodiversity. Theses shall link to the external landscape wherever possible.
2. Multifunctionality – Provision of a number of ecosystems within the development, combined between human and natural needs.
3. Integration – Interactions and links between grey and green infrastructure, Suds interventions. Liaise with the consulting Engineers on drainage.
4. Diversity – Enhancing the different structures that are in place – managed/artificial or natural and combine them as a sustainable landscape design. (Large or small).
5. Applicability – Considers if the proposals are realistic, that were developed by the design team . I.e. if the solutions to sustainable issues are adaptable to the site or not.
6. Continuity – Sustainable, the landscape proposals must be realistic and useable into the future. A level of monitoring and periodic evaluation may be required. This would be seen in terms of maintenance and management.

SOFT LANDSCAPE PLAN

The sustainable proposals also include long-term management in terms of safety concerns adjacent to airport runways and taxi areas. Therefore, the management shall be a key long-term intervention with respect to both roosting and foraging.

ECOLOGICAL ENHANCEMENTS

PROPOSED TREE PLANTING



Total Proposed New Tree Planting - No. 106

SOFT LANDSCAPE
Proposed Tree Planting
Fagus sylvatica 'Dawyck', Quercus robur, Fagus sylvatica, Aesculus hippocastanum, Pinus sylvestris, Salix alba tristis, Acer pseudoplatanus, Acer platanoides, Prunus avium, Juglans regia

Fagus sylvatica 'Dawyck'

Quercus robur

Fagus sylvatica

Aesculus hippocastanum

Pinus sylvestris

Salix alba tristis

Acer pseudoplatanus

Acer platanoides

Prunus avium

ECOLOGICAL ENHANCEMENTS

PROPOSED WOODLAND MEADOW MIX PLANTING

Woodland Meadow Mix
Species Name
Allium ursinum , Campanula latifolia, Circea lutetiana, Digitalis purpurea, Fragaria vesca, Geranium robertianum Geum urbanum, Hyacinthoides non-scripta, Hypericum pulchrum, Primula vulgaris, Silene dioica, Silene flos-cuculi Stachys sylvatica, Teucrium scorodinia, Torilis japonica, Vicia sepium, Viola riviniana.

Allium ursinum

Campanula latifolia

Circea lutetiana

Digitalis purpurea

Hypericum pulchrum

Primula vulgaris

Silene dioica

Fragaria vesca

Geranium robertia-num

Silene flos-cuculi

Stachys sylvatica

Teucrium scorodo-nia

Geum urbanum

Hyacinthoides non-scripta

Vicia sepium

Viola riviniana

GREEN INFRASTRUCTURE OBJ.

PROPOSED WILD FLOWER MEADOW

Wild Flower Meadow
An appropriate dry meadow type with wildflowers for these areas would simulate NVC type MG5. Appropriate herbs for this type of meadow include:

Common knapweed (Centaura nigra), Ribwort plantain (Plantago lanceolata) Red clover (Trifolium pratense), Bird's-foot trefoil (Lotus corniculatus), Bulbous buttercup (Ranunculus bulbosus), Meadow buttercup (Ranunculus acris), Lady's-bedstraw (Galium verum), Cowslip (Primula veris), Oxeye daisy (Leucanthemum vulgaris), Yellow Rattle (Rhinanthus minor), Common sorrel (Rumex acetosa), Burnet saxifrage (Pimpinella saxifraga), Autumn hawkbit (Leontodon autumnalis), Rough hawkbit (Leontodon hispidus)

Common knapweed

Ribwort plantain

Red clover

Bird's-foot trefoil

Bulbous buttercup

Meadow buttercup

Lady's-bedstraw

Cowslip

Oxeye daisy

Yellow Rattle

Common sorrel

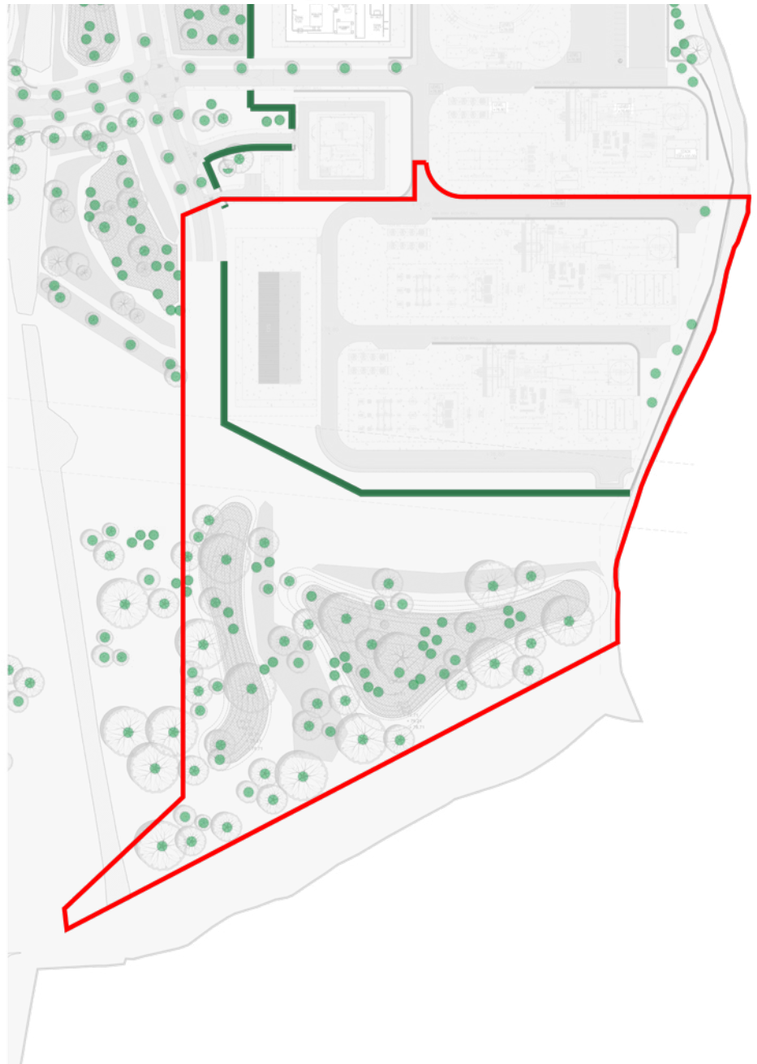
Burnet saxifrage

Autumn hawkbit

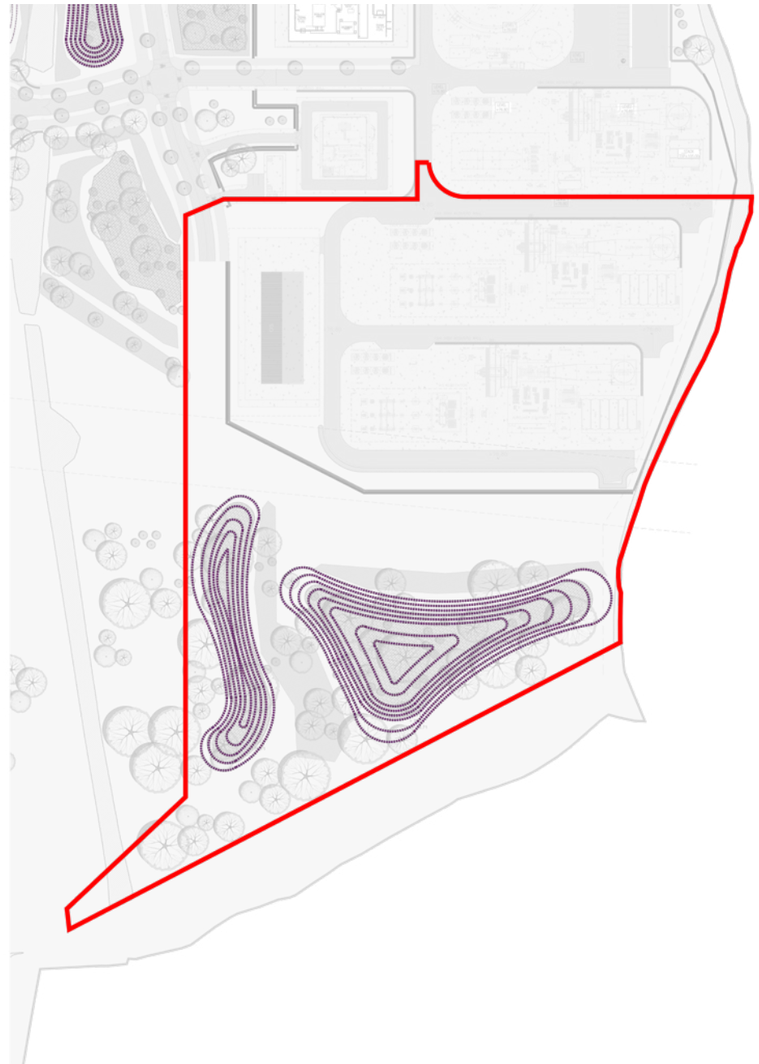
Rough hawkbit

Existing Trees/Hedgerows

New Trees/Hedgerows



Combined



Existing Hedge Retained Within the Red Line = 221 Linear Meters

New Hedge Proposed Within the Red Line = 269 Linear Meters

Total Proposed New Tree Planting - No. 106

Mounding: 500mm per contour