

# Park Hood

GREEN INFRASTRUCTURE PLAN REPORT

**HUNTSTOWN MRF**

NOVEMBER 2023/ PROJECT NO. 7670



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# 1.0 Introduction

## 1.0 Introduction

This Green Infrastructure Plan (GIP) has been prepared by Park Hood Chartered Landscape Architects following a request for further information by Fingal County Council in June 2023 in respect of a proposed Materials Recovery Facility along with a Food Container Cleaning Plant at Huntstown Townland and Coldwinters Townland, Co Dublin (Planning Reference: FW23A/0111). The development is phase one of the Huntstown Circular Economy Hub.

The GIP is to be read in conjunction with the following drawings:

- 7670-L-2100 Landscape Masterplan
- 7670-L-2101 Phase One Landscape Proposals 1-500
- 7670-L-2102 Phase One Landscape Proposals 1-1000
- 7670-L-RPT-01 Landscape Management and Maintenance Plan
- 7670-L-2700 Development Impact Plan



— Site Application Boundary



Proposed phased works

## 1.1 What is a Green Infrastructure Plan?

The following summaries what such a plan is based on:

**Green Infrastructure Planning Principles: An Integrated Literature Review (Renato Monteiro, José C. Ferreira and Paula Antunes 2020):-**

“Green infrastructure is a strategically planned network of natural and semi-natural areas, including green and blue spaces and other ecosystems, designed and managed to deliver a wide range of ecosystem services at various scales. Apart from the ecological functions, green infrastructure, as a planning tool, contributes to social and economic benefits, leading to the achievement of sustainable, resilient, inclusive and competitive urban areas. Despite recent developments, there is still no consensus among researchers and practitioners regarding the concept of green infrastructure as well as its implementation approaches, which makes it often difficult for urban planners and other professionals in the field to develop a robust green infrastructure in some parts of the world. To address this issue, an integrative literature review was conducted to identify which green infrastructure planning principles should be acknowledged in spatial planning practices to promote sustainability and resilience. As a result of this literature review, the most common eight green infrastructure planning principles were selected-connectivity, multifunctionality, applicability, integration, diversity, multiscale, governance, and continuity. These principles intend to promote and simplify the development and use of green infrastructure by different academic and implementation organizations and provide a more defined model for sustainable landscape management in order to help practitioners and decision makers during the conceptualization and planning of green infrastructure.”

Within the Fingal County Development Plan 2023 -2029, it notes within Chapter 9 Introduction, the following:-

Green infrastructure can be understood as a planned network of interconnected natural areas such as parks, rivers and open spaces that help to conserve natural ecosystem functions. Green infrastructure planning results in environmental, economic and social benefits by providing nature-based solutions to development objectives. This approach results in resilient urban landscapes adapted for and reducing the negative effects of climate change.

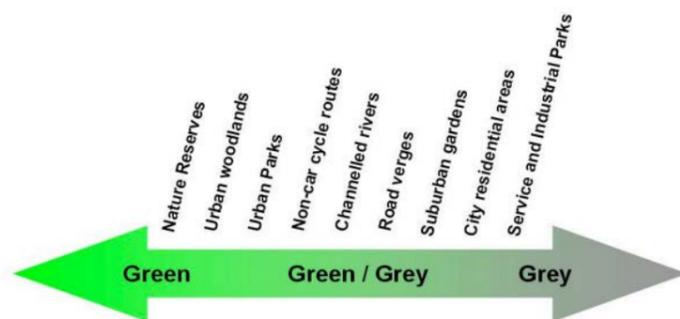
It subsequently sets out the following objectives and policies:-

- 9.5.2 Green Infrastructure and Planning A key objective of green infrastructure planning is that green infrastructure management and provision is integrated with plans for growth and development. All proposals for development must take account of the County’s strategic green infrastructure resources and ensure that these are protected, managed and enhanced as new development takes place. In addition, proposals for development must seek to provide for the protection and provision of green infrastructure which addresses the five green infrastructure themes identified in the Development Plan in a coherent and integrated manner.

- 14.18 Green Infrastructure and Natural Heritage Existing green infrastructure should be identified at the initial stages of the planning process for development and should guide the design of an appropriate site layout. Applicants shall submit an Integrated Green Infrastructure Plan as part of pre-planning submissions to the Council. This plan shall show existing natural features (hedgerows, significant trees, waterbodies) and the proposed green infrastructure network within the development. These proposals should include; “ Details of open space development proposals. “ Urban and river ecological corridors. “ SuDS measures. “ Green roofs

and walls location and specifications. “ Locations of bird, bat and invertebrate boxes. “ Permeable paving (grasscrete or similar). “ Tree-lined streets. “ Biodiversity enhancement of private gardens and hedgerow management proposals. “ Linkages to the surrounding open space and/or natural landscapes. “ Walking and cycling infrastructure in the area.

- Objective DMSO124 – Integrated Green Infrastructure Plan Require the submission of an Integrated Green Infrastructure Plan as part of planning applications for residential developments over 50 units and all commercial developments over 2000 sqm.



## 2.0 Site Context

The site is located in the townland of Coldwinters just to the north of the M50 Motorway and to the west of the N2. It is accessed via the North Road. It encompasses 9.8292 hectares and comprises two fields and a section of an existing road along the eastern boundary. The western field had been used for farm animal grazing, but is no longer used for this purpose. The eastern field had been used for tillage, but is currently uncultivated. The ground levels rises from the site boundaries to a small hillock in the centre of the site.

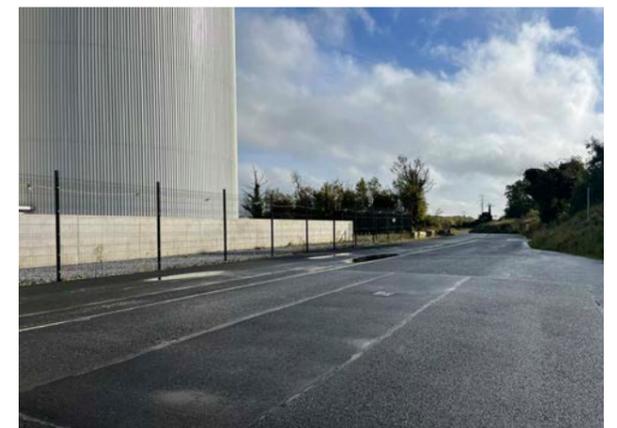
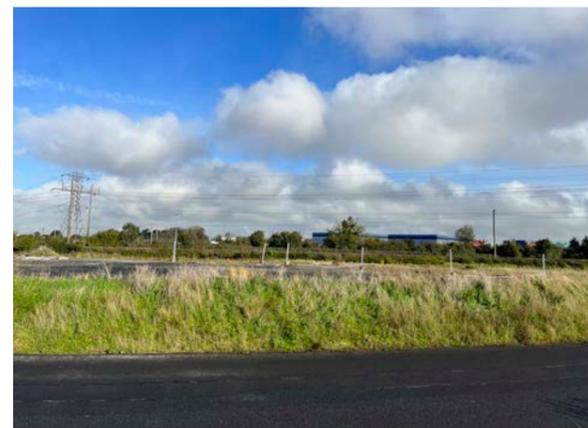
There are overhead powerlines running from south-east to northwest across the north-eastern and central parts of the site.

It is in an area zoned for heavy industry in the Fingal Development Plan 2023 to 2029.

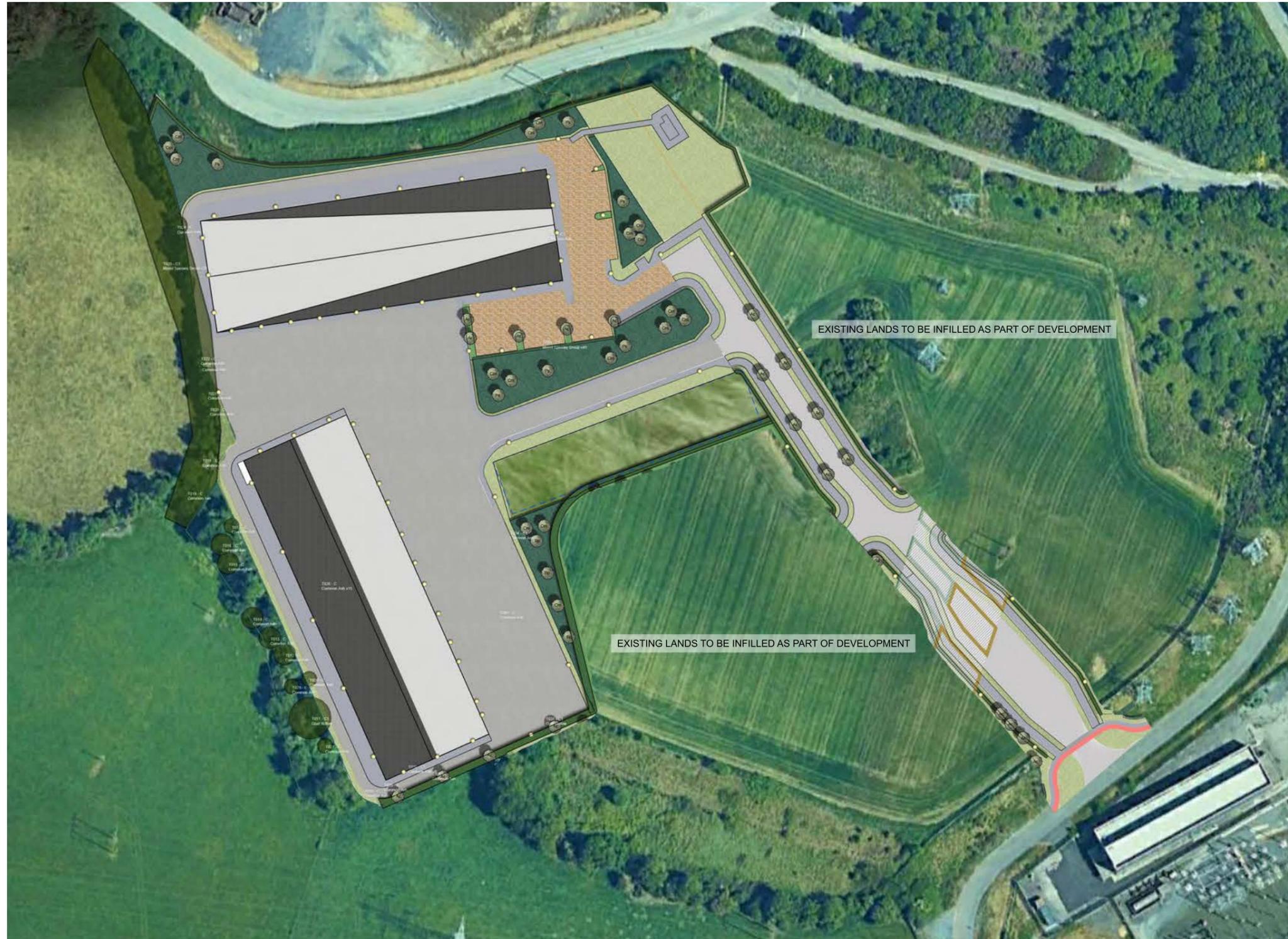


## 2.1 Site Context

The surrounding land use (Figure 2.2) is very mixed and includes Huntstown Quarry, Huntstown Bioenergy (an anaerobic digestion plant owned by the applicant), Huntstown Power Station and an Eirgrid 220 kv Substation. The adjoining lands to the east, south and west are currently used for agriculture. The southern runway of Dublin Airport is approximately 2.4km from the north-eastern boundary. Consequently the landscape has a heavily disturbed character with functional, utilitarian and brownfield characteristics with any remnant fields bound by such land-uses and not having a pristine or highly valued landscape character. In general, the landscape would be rated as one of low landscape sensitivity, value and condition. Further, it is not overlooked by any designated views or prospects, is not near an amenity area and is not close to any cultural and historic sites.



### 3.0 Landscape Proposals - Phase One

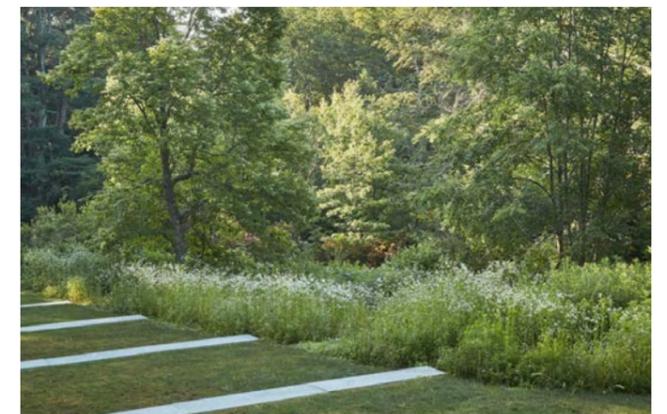


The landscape designs associated with the proposed development of the site are based on the concept of gapping up and augmentation of boundary hedgerows, enhancing the general landscape treatments within the site and ensuring adequate screen boundaries are created around and through the site. Plants selected are indigenous and species selection follows from those identified within the All-Ireland Pollinator Plan (and appropriate reference to the Draft Fingal Biodiversity Action Plan 2022-2030) to ensure successful plant establishment that will merge visually and ecologically into this area. Internally, the site will include grass, hedgerows and gravel areas though these areas are visually obscured from any publicly accessible areas. The client objective for these areas is to ensure the landscape has a neat, clean and easily maintained character.

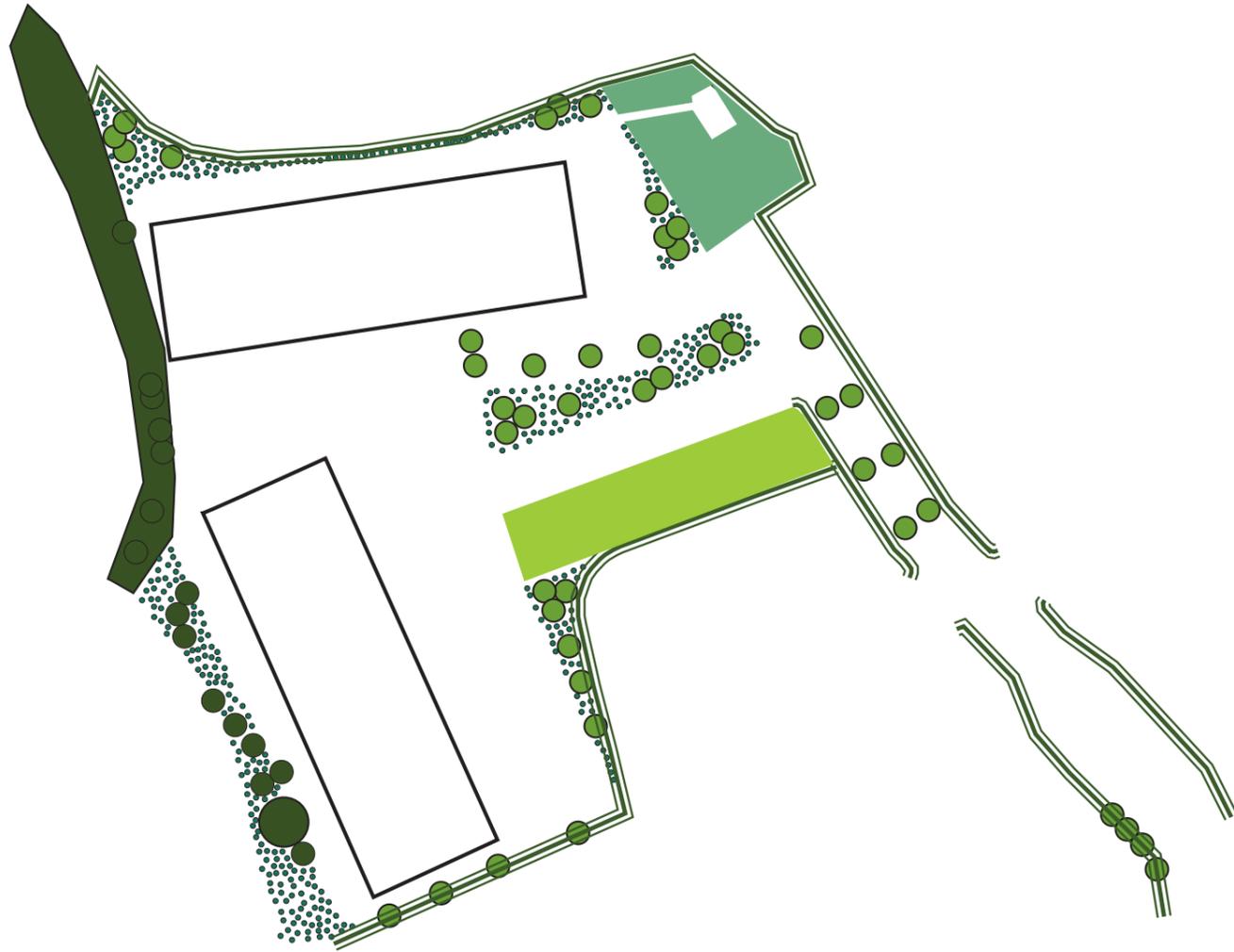
Landscape works to be undertaken by an ALCI approved landscape contractor and in accordance with BS 4428:1989 Code of practice for general landscape operations (excluding hard surfaces).

Mitigation measures include proposals to reduce dust generation which can present visual intrusion but this would not have a significant bearing on any local or publicly accessible areas.

The design rationale is to provide tree lined avenues along the internal roads with planted verges, pathways and further shrub planting between the buildings and parking areas.



## 4.0 POLICY GINHP3 GREENING OF DEVELOPMENTS



### POLICY GINHP3 GREENING OF DEVELOPMENTS

In broad terms the Application Site extends to 98292m<sup>2</sup> of which the proposed Materials Recovery Facility, associated yards and access (i.e. paved areas) extend to 19128m<sup>2</sup> in phase 1 and 40022m<sup>2</sup> site wide. The remnant area of the site is to be landscaped or includes existing hedgerows / vegetation which is to be retained and augmented. In total the proposed planting includes the following:-

#### Phase 1

- 45 no. Standard Trees;
- 983 linear meters of new hedgerows;
- 278 linear meters of retained and augmented hedgerows;
- 6105 m<sup>2</sup> of native woodland planting;
- 1959 m<sup>2</sup> of meadow seeding;
- 160 m<sup>2</sup> of shrub planting;
- 4687 m<sup>2</sup> of grass seeding.

If the wider site is built out, this will include further planting works that would further contribute to the environmental quality, setting and character of the site and includes the following:

#### Wider Site (Phase 1,2 & 3)

- 112 no. Standard Trees;
- 983 linear meters of new hedgerows;
- 436 linear meters of retained and augmented hedgerows;
- 7286 m<sup>2</sup> of native woodland planting;
- 3662 m<sup>2</sup> of meadow seeding;
- 1308 m<sup>2</sup> of shrub planting;
- 13800 m<sup>2</sup> of grass seeding.

Green roofs were considered for the buildings associated with the proposed Materials Recovery Facility but as these are being used for solar PV panels, this was not viable. Further, brown roofs and water harvesting was not considered appropriate given the nature of the proposed land-use.

Working with the project engineers, natural SUDs measures are incorporated into the proposal including swales, permeable paving to correlate with Policy CINHP3.

Stockpiles of soil will not be located on sites that will result in these having their own detrimental effects on the local area. Any un-natural spoil heaps or stockpile areas to be re-graded and reformed to tie in with the natural topography.

Any bare ground and earth will be seeded with an appropriate grass mixture to minimise erosion and potential dust problems Restoration of any areas disturbed during extractive process to be undertaken immediately following completion of operations period via grass seeding with a green characteristic anticipated to return to these areas within 2 months. Consequently the site will have a significantly improved landscape with this being a more managed, species diverse and greener nature as well as resulting in a more wooded character as this matures than it currently has or has had for some time.



## 5.0 POLICY GINHO15 SUDS

### POLICY GINHO15 SUDS

The subject site is not subject to flooding and the associated Drainage Report for this application (Coyle) demonstrates there is no risk of flooding on the site.

The proposal includes a Storm Water Management Plan prepared by the project engineers based on guidance and recommendations set out in the Greater Dublin Strategic Drainage Study and the SuDs Manual.

Any ponds or swales on this site could give rise to a bird strike hazard, and ponds or swales could also give rise to a glint & glare potential affecting visibility from Dublin Airport's Control Tower cab. Consequently, there should be no permanent ponds, and minimal swale provision (if any). In effect, this is a site on which the otherwise "green solutions" (referred to in paragraph 4.5.2.8. of the Fingal County Development Plan 2023 -2029) would be "not feasible".

Therefore, due to the site's proximity to Dublin Airport, and its location under three "Obstacle Limitation Surfaces" for Dublin Airport and for Casement Aerodrome, it is recommended – for Bird Strike Hazard reasons – that SuDS provision be made by means of a large underground attenuation tank.

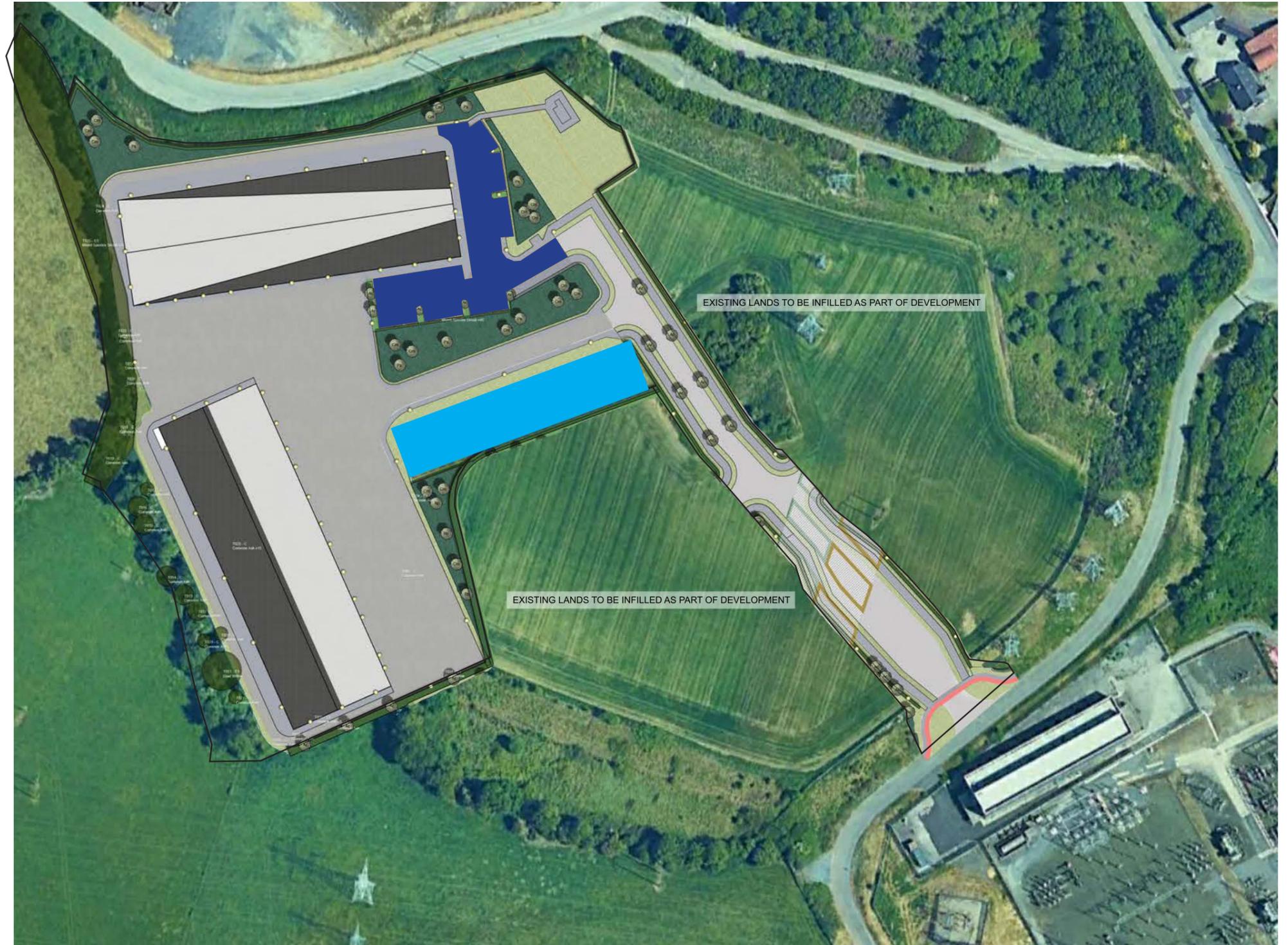


DIAGRAM SHOWING ATTENUATION TANKS / DRAINAGE STRATEGY

- ATTENUATION TANK / INFILTRATION SYSTEM
- PERMEABLE PAVING TO STAFF CAR PARK

## 6.0 POLICY GINHP8 ARCHAEOLOGY AND GREEN INFRASTRUCTURE

The entire application site at Huntstown has been assessed by the Archaeological Consultancy Services Unit in October 2023. It noted that the “... northern slope of the hill at Huntstown has been previously quarried, and habitation evidence may have been disturbed or removed as a result. However, while speculative until the features are excavated archaeologically, the curvilinear feature identified during the geophysical survey at the site suggests this was the enclosure ditch of a settlement based at the summit of the hill with linear features running to the south related to the associated field systems.”

The development as proposed will have a direct impact on the identified archaeology and as preservation in situ is not an option, mitigation can only be achieved through archaeological excavation.

It is recommended that all features of archaeological significance should be resolved prior to the commencement of any construction works within the site. It is proposed that the two areas containing archaeological features are stripped of topsoil under archaeological supervision and that they are archaeologically resolved and preserved by record. This should be carried out by a licence-eligible archaeologist and in compliance with a method statement approved by the Department of Housing, Local Government and Heritage in consultation with the National Museum of Ireland.



### 6.1 OBJECTIVE GINH018 HERITAGE LANDSCAPE

The site is not part of or close to any site that would be considered of heritage significance or associated with any sites of heritage importance. The nearest landscapes are sufficiently distant from the site for them to be affected in terms of views or character by any activity on this site.

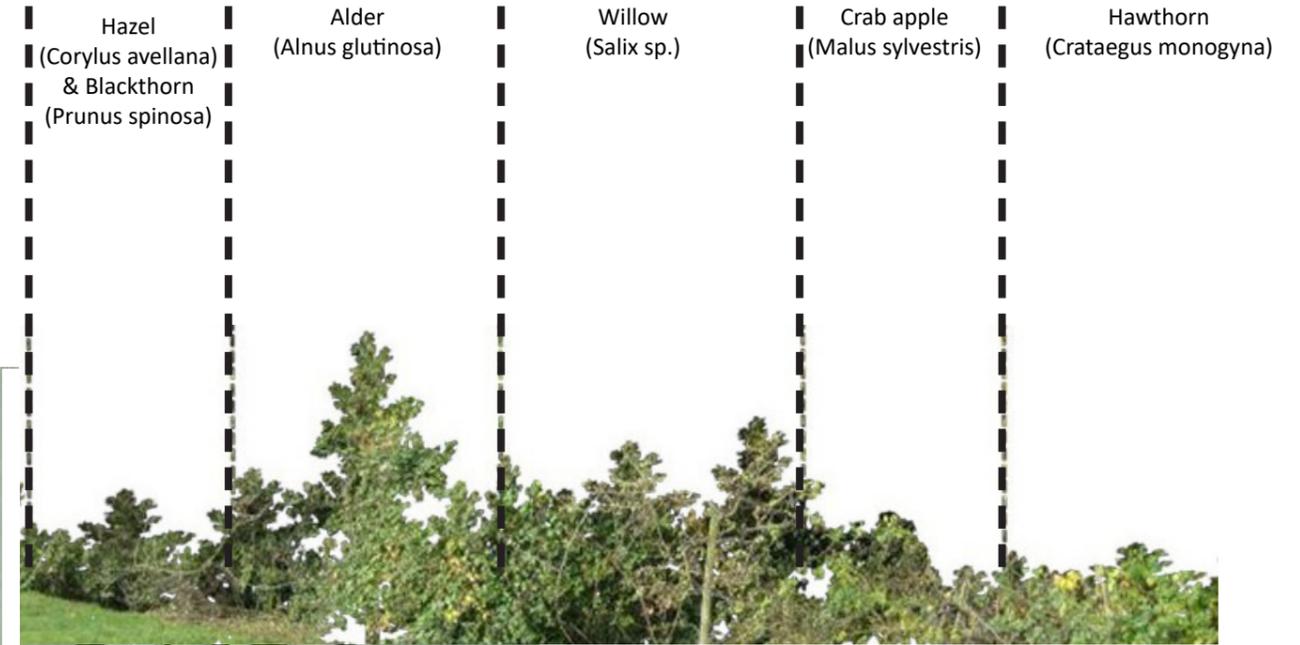


## 8.0 OBJECTIVE GINH021 INTEGRATION OF GREEN INFRASTRUCTURE

Maps available from the Environmental Protection Agency (EPA) indicate no protected landscapes, environment or ecology areas on or close to the Application Site.

The integration of green infrastructure on the site boundaries (mainly existing hedgerows) and new landscape areas will allow for improved wooded corridors across the wider site through the planting of over 118 trees, 1129 linear meters of hedgerows and 8082m<sup>2</sup> of woodland across the site (extending to 8.2% of the site).

The collective planting and landscape works will contribute to the wider green infrastructure in relation of landscape character benefit, ecological / environmental worth and visual amenity of the site.



HEDGEROW AUGMENTATION

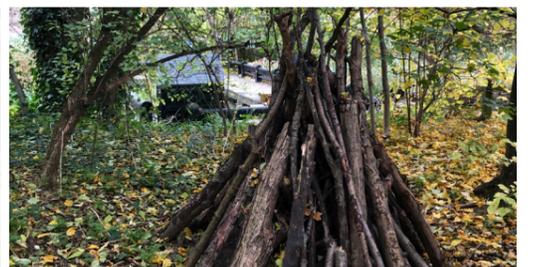
## 9.0 OBJECTIVE GINH025 REWILDING



Planting and species follow those identified within the All-Ireland Pollinator Plan (and appropriate reference to the Draft Fingal Biodiversity Action Plan 2022-2030). The management of the site will ensure the control of noxious weeds such as Ragwort (*Jacobaea vulgaris*)

### POLICY GINHP21 PROTECTION OF EXISTING TREES AND HEDGEROWS

Trees were subject to a Tree Survey in September 2023 by Arborist Andy Boe and noted the “amenity value of the trees could be considered low.” It identified 43 no. trees, groups of trees or hedgerows across the site which equated to 265 no. trees. Protection measures for hedgerows or trees will be undertaken (in accordance with BS5837:2012) across the application site during the operational period including keeping appropriate “buffer” distances across root zones of mature trees of approximately 5m; There will be a five year guarantee after construction that all the proposed planting works still exist and have established in line with landscape design expectations. This will ensure that no planting has been removed or damaged due to the subsequent construction or plant failure. Procedures will be implemented whereby any failed or stressed vegetation or grass planted will be replaced as soon as they are identified. Monitoring will also ensure that there is no ponding of water due to differential settlement or any other severe differential settlement of surface layers. Regular monitoring will be undertaken to determine success of landscape operations and ensure they are behaving in the manner anticipated at design stage. If required, elements of the design can be adapted to accommodate changes required by actual field experience.



## 10.0 POLICY GINHP21 PROTECTION OF EXISTING TREES AND HEDGEROWS

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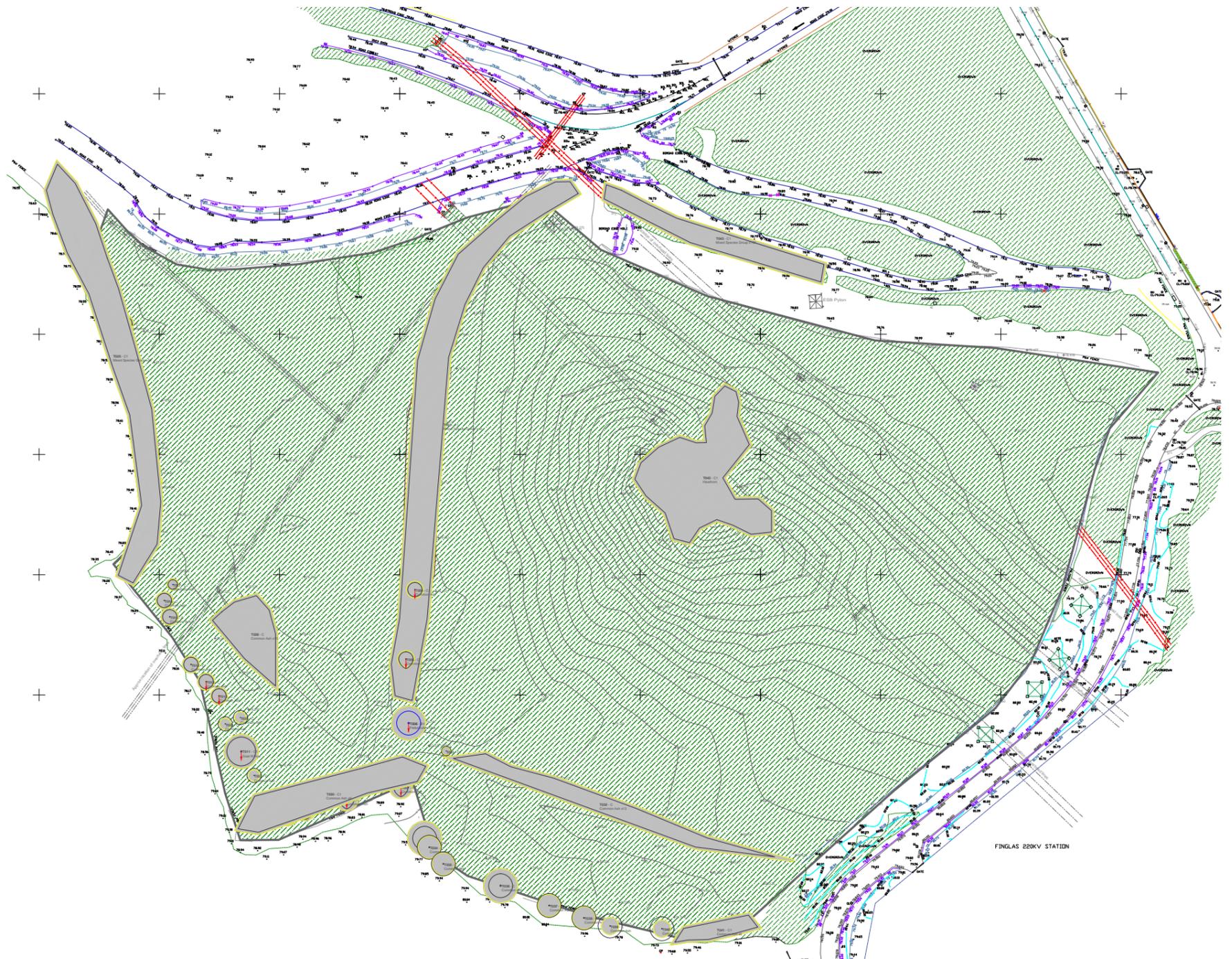
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Example of Tree protective fencing



Tree Constraints Plan courtesy of Andy Boe

# 10.1 OBJECTIVE GINH046 TREE REMOVAL

## Development Impact Plan

### KEY

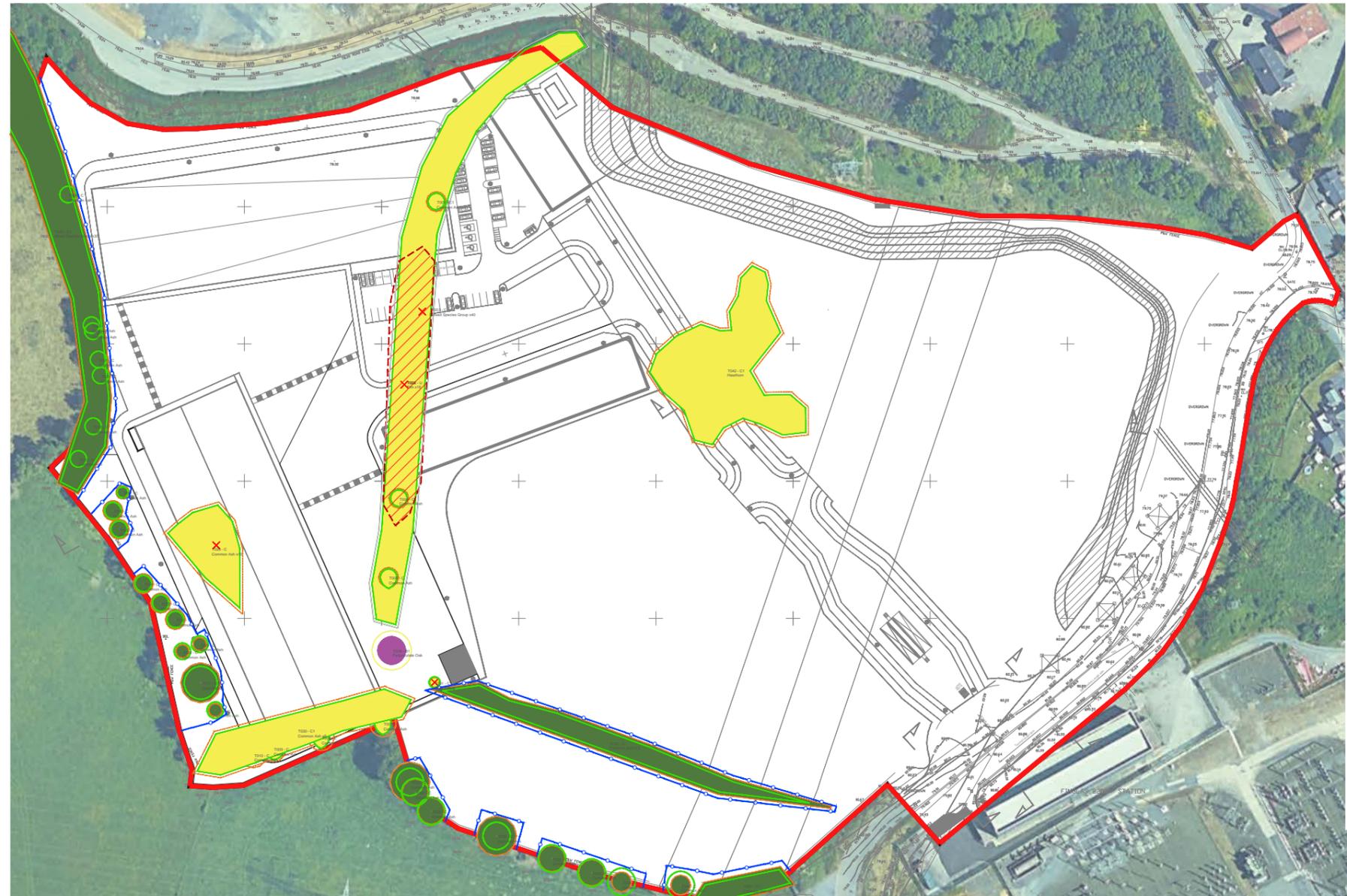
- ▬ Application site
-  Outline plan of roads, dwellings and other built elements that form the key components of the proposed planning application
-  Tree Protection Zone as defined in accordance with BS 5837:2012 Trees in relation to Design, Demolition and Construction. Recommendations (As identified in Andrew Boe Tree Survey August 2023.)
-  Tree protection barrier

### Proposed Works to Existing trees

-  Trees identified as Category B - Trees of moderate quality with an estimated life expectancy of at least 20 years to be felled to facilitate development. Tree No. T006
-  Trees identified as Category C - Trees of low quality with an estimated life expectancy of at least 10 years, or young trees with a stem diameter below 150mm and to be retained.
-  Trees identified as Category C - Trees of low quality with an estimated life expectancy of at least 10 years, or young trees with a stem diameter below 150mm to be felled to facilitate development. Tree No. T001, T004, T005, T007, T008, T009, T010, T026(G), T030(G), T031, T042.
-  Trees identified as Category U - Those in such condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10 years.
-  Trees noted as being in "Poor" condition and recommended for felling as per Tree Survey Report 2023. Trees Nos. T2(G)

### TABLE SUMMARY FOR ALL TREE QUANTITIES

TOTAL NOS OF TREES SURVEYED	QTY
Total number of trees surveyed within the site including individual trees, groups and hedges	265
FELLED - Subject to below condition	QTY
Trees noted as being in "Poor" condition and recommended for felling as per Tree Survey report 2023	18
Trees and woodland groups noted as being low quality in Tree Survey 2023 to be felled to facilitate development.	72
Trees and woodland groups noted as being in moderate condition in Tree Survey 2023 to be felled to facilitate development.	1
<b>TOTAL</b>	<b>91</b>
RETAINED - Subject to below conditions	QTY
Trees and woodland groups to be retained	174



There are no Tree Preservation Orders in place on this site.

The Tree Survey (Andy Boe September 2023) notes "Where possible, it is generally considered desirable for Category 'A' and Category 'B' trees to be retained and incorporated into new developments and layouts. Category 'U' trees are not considered to be appropriate for retention".

Apart from one Oak tree (T006) graded Category 'B' and another group of Elm trees (T002) graded Category 'U', all the trees / hedgerows / groups surveyed on this site are graded 'C' and defined as low quality or unremarkable and thereby limited landscape.

The extent of tree or hedgerow removal is set out on Dwg. No. 7670-L-2700 Development Impact Plan.



## 10.2 POLICY GINHP22 TREE PLANTING

-  Proposed Woodland Planting - 8082 sqm
-  Proposed Tree Planting - 112no.     Existing Trees
-  Proposed Hedgerow Planting - 983 Linear metres
-  Proposed Wildflower Planting - 3662 sqm
-  Proposed Shrub Planting - 1308 sqm
-  Proposed Grass - 13800 sqm

The proposed development includes the following tree species:



Betula Pendula



Acer campestre 'Field maple'



Junus Avium 'Plena'



Sorbus acuparia



Pinus sylvestris 'Scots pine'



## 11.0 PROPOSED PLANTING

### 11.1 Buffer planting



Corylus avellana



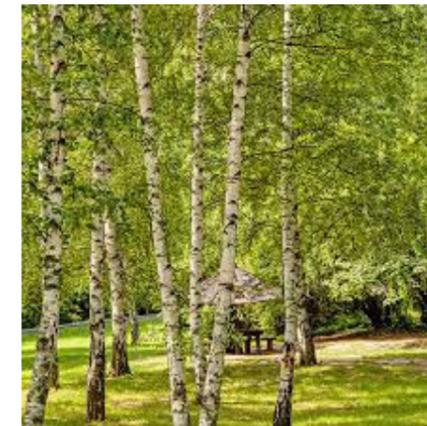
Pinus sylvestris



Viburnum opulus



Euonymus europaeus



Betula pendula



Crataegus monogyna



Prunus avium



Ilex aquifolium

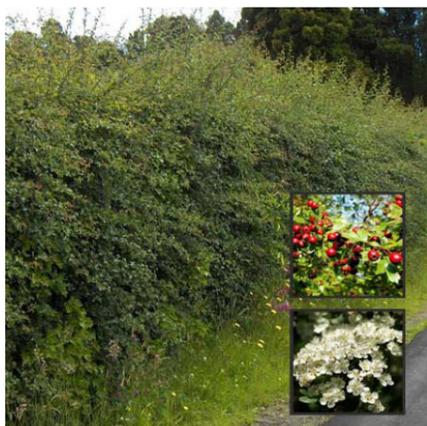


Sambucus nigra



Prunus spinosa

### 11.2 Native hedgerow



Crataegus monogyna



Euonymus europaeus



Fagus sylvatica



Acer campestre



Rosa canina



Prunus avium



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