# **Haggardstown, Blackrock** Landscape Strategy / Design Code



Haggardstown, Blackrock - Landscape Strategy / Design Code,

# Haggardstown, Blackrock

Landscape Strategy / Design Code

This document has been compiled by Mullin Design Associates, Chartered Landscape Architects, as part of a masterplan design and submission on behalf of Kingsbridge Consultancy Ltd for development lands at Haggardstown, Blackrock, Dundalk.

#### **Report Author**

This study has been drafted by Pete Mullin, BA (Hons) CMLI, principal of Mullin Design Associates.

Pete has studied, practiced and taught Landscape Architecture for over 25 years, is a Chartered Landscape Architect, Policy Consultant and Member of The Landscape Institute.

During his career Pete has worked within many multidiscipline design teams on a variety of high profile and award winning projects. He has successfully realised numerous projects from feasibility and community consultation through to implementation stage.

He has prepared design codes, landscape and green infrastructure strategies, and detailed landscape designs for many large scale mixed use masterplans.

He has considerable experience in relation to assessment and research work having been directly responsible for preparation of open space audits, landscape management plans, urban and landscape characterisations as well as contributed to Local Area Plans, all of which are considered relevant to the subject site.

#### **Contents**

- 1 Background & Context
- 2 Existing Trees
- 3 Development Character Areas
- 4 Materials Hardscape, Softscape, Furniture, Lighting
- 5 LAPS, LEAPS & NEAPS
- 6 SUDS
- 7 Homezones
- 8 Healthy Places Cycleways / Connections
- 9 General Arrangement, Proposals (Refer to Separate Landscape Plans)
- 10 Boundary Details

Appendix 1 - Tree Survey

# 1 Background and Context

#### Introduction

This study considers the landscape and visual context of a proposed 176,466msq (17.6)Ha residential development off the R172 Blackrock Road, south east of Dundalk Town. (Refer to red marker Figure 1 below)

It aims to identify the natural capital assets associated with the subject site, along with guidance and design input to assist with integration of the proposed development into the receiving environment.

Figure 1 - Location Plan

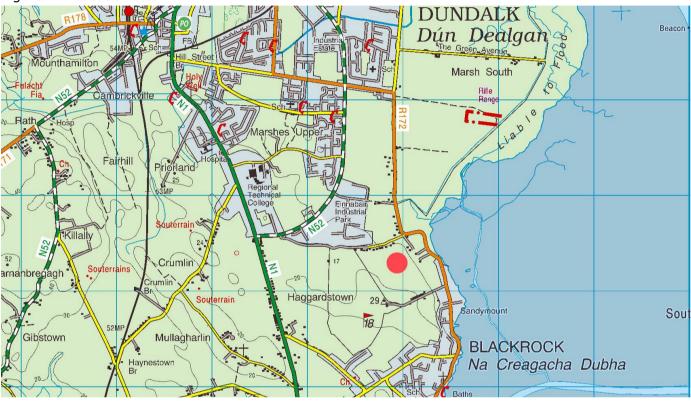
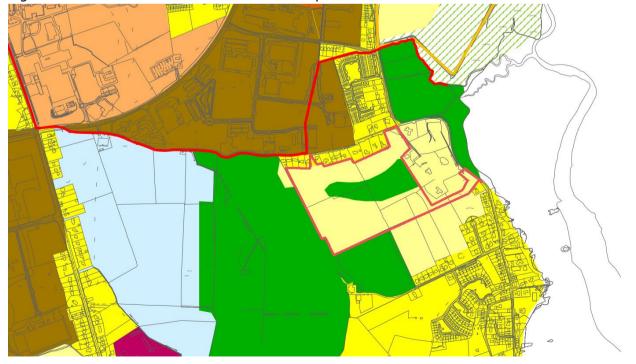


Figure 2 - Extract Dundalk & Environs Development Plan 2009 - 2015



# **Existing Conditions**

Figure 3 - Site survey

The subject site which is currently good quality rolling agricultural land, occupying an area of c. 176,466msq (17.6)Ha. In plan the site is generally square in form, comprised of two large field enclosures.

The Northern boundary is defined by a variety of private residential properties which front Bothar Maol, a historic route, which is only publically accessible along the eastern portion adjoining the site.

The western and a portion of the southern boundary of the site adjoins Dundalk Golf Course and practice range. The majority of this boundary is fenced and planted with non-native conifer. The remainder of the southern boundary joins with lands which are currently in agricultural use, but also zoned for residential use.

Along much of the eastern boundary (particularly to the north east) are mature hedgerows and trees which separate the site from two large sites which are privately owned residential properties. ( Refer to Figure 8,9,10 &11)

As illustrated in the site topographical survey - Figure 3 below - the land undulated significantly, with a general rolling transition from the lowest point to the north east corner at c.6.08mAOD (where it meets Bothar Maol) to a high point of 23.78mAOD to the south west (at the boundary with the golf course / practice area) .

NOTE: The proposed access link to the east will meet the Blackrock road at c3.40m AOD however rises by approx.9m westward before reaching proposed residential lands.

(NOTE: Arrows represent position & direction of photos in Figures 8,9,10 &11)

# **Directional Images**

Figure 4 – Aerial View North







Figure 6 – Aerial View East





# Landscape Features (Existing Boundaries)

NOTE: The images below have been taken from one of the highest parts of the site (refer to Figure 3 for location)

Figure 8 – Typical Existing View towards Northern Boundary



Figure 9 – Typical Existing View towards Southern Boundary (At driving range end of site)



Figure 10 – Typical Existing View of Western Boundary (Golf Course)



Figure 11 – Typical Existing View East (Note: This view is from a high point in the direction of the Class 2 Zoned Open Space – The fragmented hedgerow shown in the centre of the image would be retained and augmented with additional new planting.



# **Landscape Features (Various)**

Figure 12 –View west along Bothar Maol - (NOTE: The trees in the foreground are at the lowest part of the site where it meets Bothar Maol in the Northeast corner. All healthy trees in this location to be protected, maintained and new trees introduced as required.



Figure 13 –View of Existing Hedgerow through centre of site. This will be conserved were possible and widened with native planting to increase its habitat and landscape value



Figure 14 –View from site in a Northerly direction towards an existing access to Bothar Maol – It is proposed that this 'Link' would be retained within the development to form valuable connection though the site to a proposed public Greenway cycle path along the historic route of Bothar Maol which is currently inaccessible to the public.



Figure 15 –Typical view along the section of Bothar Maol (believed to be part of the route of Táin Bó Cúailnge) which is inaccessible to the public, but which offers and excellent deliverable Greenway Link between Dundalk Town Centre and Blackrock Centre connected through the subject site.



Haggardstown, Blackrock - Landscape Strategy / Design Code,

# **Historic Landscape**

Figure 16 below illustrates the context of the site c.1850. The role of Bothar Maol as a connective road / lane is clear, however with the exception of one or two small holding to the west (now gone) no properties existed along it at that time.

The field patterns associated with the site have changed little – belonging at that time to one relatively large landholding which extends over much of the area occupied currently by the golf course and included the house and a threshing mill directly to the east.

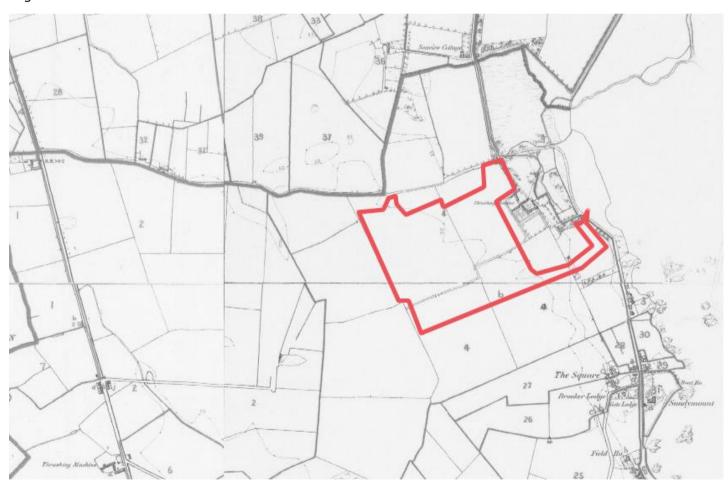
At the time of this mapping there appear to have been a small, but prominent cluster of properties congregated around an area known as 'The Square' approx. 600m south east of the subject site, with the main street of Blackrock further south.

Trees are illustrated along the right of way to the house and threshing mill, reflected by the continuing mature trees visible in that location presently.

A single narrow line running North South through the site reflects the location of the existing hedgerow illustrated in Figure 13 above.

In addition there appears to be a staggered drain route running west to east through the site, although no evident of this remain today.

Figure 16 - Historic Plan c. 1850s



# **Open Space Policy/Zoning**

#### 4.9.3 Public Open Space

# 4.9.3.1 Qualitative Requirements

The provision of public open space within residential developments is a key requirement in the provision of high quality residential areas, contributing to the character and attractiveness of the development. The basic principle governing public open space is that provision should be made for both active and passive open space. It should be safe convenient and accessible for all sections of society particularly children, the elderly and people with disabilities. Accordingly, open space networks should be an integral part of an overall development and provide linkages to adjoining areas of residential and community facilities. Open space networks should be organised along passive green linear parks, with pockets of active open space, community facilities and schools located close to or along them. In proposed developments public open space should be arranged to facilitate the retention of existing landscape features, such as mature trees, hedgerows, biodiversity rich areas, streams, rivers and archaeological features/remains. The provision of high quality landscaping, including the provision of semi mature trees, should be an integral part of any residential development. Finished levels for public open space relative to adjoining areas and full details of hard and soft landscaping, play equipment and furniture should be provided as part of planning applications.

Passive surveillance, accessibility and linkages to other public open spaces, existing and proposed, should be incorporated into the layout. Peripheral areas, narrow tracks, back land areas and poorly proportioned areas will not be considered acceptable. No area of public open space should be less than 200 square metres in area and no boundary should be less than 10 metres in length.

It is recommended that public open space should be provided in a variety of forms to cater for the active and passive recreational needs of the community.

- Informal, flat kick-about areas,
- Playgrounds for a specific age group, that is, local equipped areas for play (LEAP) as specified by the National Playing Fields Association for 4-8 year olds or a neighbourhood equipped areas for play (NEAP) for 8-12 year olds,
- Circuit training facilities,
- Formal playing fields,
- Village greens in larger developments,
- Landscaped gardens,
- Small parks or natural parkland utilising existing and enhancing native flora and fauna,
- Seating and rest areas,
- Paved areas should be designed using sustainable urban drainage principles (SUDS),

# 4.9.3.2 Quantitative Standards

The quantitative standards in relation to public open space within residential areas are as outlined in Table 4.4 below:

Table 4.4 Quantitative standards for public open space in residential areas

	Minimum Percentage of the Gross Site Area
Standard Requirement*	15 % *
Institutional Lands	20 %

<sup>\*</sup>Where residential developments are in close proximity to public parks or other natural amenities or in the town centre, a relaxation of the above standards may be permitted. Where open space standards cannot be achieved, more intensive recreational facilities may be accepted by the Council in lieu.

#### **Policy**

- To require that in all new residential development that the quantitative public open space standards as set out in Table 4.4 and the qualitative requirements of Section (4.9.3.1) described above are adhered to unless otherwise provided for in any local area plan.
- RES 21 In small housing schemes where the 15% requirement is less than 200 square metres the assessment of public open space shall be on a qualitative basis or as agreed with the planning authority.
- RES 22 To ensure that no area of public open space is less than 200sqm in area and no boundary is less than 10 meters in length

#### 4.9.5 Public Art

Public art should be provided alongside infrastructure and development schemes through the Per Cent for Art Scheme. The Council should be consulted on opportunities for permanent art to reflect the area's heritage and to enhance focal points within towns, villages and developments.

#### **Policy**

RES 24 To encourage planning applications for residential schemes in excess of seventy five dwelling units to incorporate works of public art.

## 4.10.2 Private Amenity Space

The provision of an area of outdoor private amenity space, attaching or available to each residential unit is important for the quality of the residential environment. Therefore all new residential units will have access to an area of private amenity space. In apartment and innovate layouts, private amenity space may be provided in the form of shared private areas, courtyards, terraces, patios, balconies and roof gardens or any acceptable combination of these.

A relaxation of these standards for public and private amenity space will be permitted where development is proposed to Protected Structures or within Architectural Conservation Areas, where complying with these standards would conflict with protecting architectural features of special interest and where it can be demonstrated that alternative amenities and facilities are available within the neighbourhood – as long as privacy is not compromised.

**Table 4.9 Private Amenity Space Standards** 

Dwelling Unit	Type Min. Private Open Space Standard (Square metres)
Houses - 1 and 2 bedroom (Greenfield/suburban)	60
Houses – 3 and above bedrooms (Greenfield/suburban)	80
Houses (Town Centre/brown field)	50
Apartments/Duplexes (Greenfield/suburban)	
1 bedroom unit	20
2/3 bedroom unit	40
Apartments/Duplexes (Town Centre/ brownfield)	
1 bedroom unit	10
2/3 bedroom unit	20

#### **Policy**

RES 27 To require that private amenity space is in accordance with the quantitative standards as set out in Table 4.9 above.

<u>RES 28</u> To provide at least 22m between windows of habitable rooms above ground floor level which face those of another dwelling.

## 5.8 Trees, Woodlands and Hedgerows

The Development Plan recognises the value of trees, woodlands and hedgerows, and the contribution they make to Louth's natural landscape and biodiversity.

#### 5.8.1 Tree Preservation Orders (TPO's)

The planning authority can also protect trees whose retention achieves public amenity benefits. The Planning and Development Act 2000 (as amended) sets out the legal framework and procedures to make a Tree Preservation Order (TPO). The Council has made 4 TPOs **none** of which are located on or adjacent to the subject site.

## 5.8.2 Champion Trees

The Tree Council of Ireland and the Irish Tree Society initiated the Tree Register of Ireland (TROI) project in 1999 with the aim of compiling a database of trees in Ireland.

"Champion Trees – A Selection of Irelands Great Trees" was published by the Tree Council. 21 Champion Trees were identified in the area of Louth as part of this project **none** of which are located on or adjacent to the subject site.

# 5.8.3 Trees and Woodlands of Special Amenity Value

The planning authority considers 33 trees and groups of trees to be of special amenity Value. There are **none** located on or adjacent to the subject site.

#### **Policy**

- HER 13

  To protect trees and woodlands of special amenity value and to review and where appropriate make a Tree Preservation Order(s), in relation to trees of special amenity value (including those identified as Possible Tree Preservation Orders in the Level 3 Settlements) or any other tree(s) of amenity value where the planning authority considers such trees to be at risk.
- HER 14 To investigate the feasibility of carrying out a survey of all trees of special amenity value within the county.
- HER 15

  To require an assessment of the implications of any proposed development on significant trees and hedgerows and streams located on lands that are being considered for development. Survey and protection procedures detailed in Appendix 16 will be required by the council.
- Where in exceptional circumstances, trees and or hedgerows are required to be removed in order to facilitate development, there shall be a requirement that each tree felled is replaced at a ratio of 10:1 and each hedgerow removed is to be replaced with native species where feasible.
- HER 17 To increase native tree coverage in the County by promoting the planting of suitable trees along public roads, residential streets, parks and other areas of open space.
- HER 18 To promote such initiatives as private and community driven tree planting schemes.
- HER 19 To investigate during the lifetime of the Plan the addition of Trees & Woodlands of Special Amenity Value and where appropriate to include in Table 5.8 and Map 5.10

# **Surrounding Landscape Character**

Louth County Council completed a county wide landscape character assessment (LCA) in 2002, and although somewhat outdated provides a useful starting point when considering landscape context of the subject site.

The LCA associated with the site as known as 'Dundalk Bay'

#### **Policy**

<u>HER 10</u> To afford protection to the landscapes and natural environments of the County,

by permitting only those forms of development that are considered sustainable and do not unduly damage or take from the character of the landscape or

natural environment.

HER 11 To co-operate with adjoining local authorities, both north and south of the

border, to ensure that the environment is maintained in a sustainable manner and to support the coordinated designation of sensitive landscapes and policy approaches with adjoining areas and on all aspects of environmental

protection, particularly where transboundary environmental vulnerabilities are

identified.

HER 12 To consider the designation of Landscape Conservation Areas to protect specific

important landscapes.

Figure 17 - Louth Landscape Character Assessment 2002.



#### **Dundalk Bay Coast**

#### **Key Characteristics**

- Land is relatively flat and not higher than 20m O.D.
- Seashore is mainly of marsh at the northern end, which gives way to sandy beaches in the south. Coastal erosion is evident.
- Well-defined hedge rows with larger fields. Some examples of old Country house estates with broadleaf planting.
- Main settlements are Blackrock, Dromiskin, Castlebellingham/Kilsaran and Annagassan.
- Motorway to the west has reduced the traffic along the old N1
- The area is rich in archaeological features.
- Dundalk Bay is a designated Special Protection Area (SPA).
- Isolated housing is very evident.

#### Landscape description.

The area extends from the marshes in Dundalk to Dunany Point and varies from  $\frac{1}{2}$  km to  $\frac{2}{2}$  kms in width, inland from the coastline. The landscape is quite flat and seldom rises above the  $\frac{20}{12}$  m. O.D. contour.

The predominant land uses are non irrigated arable land and pastures. Due to the shallowness of Dundalk Bay the intertidal area presents an expansive landscape at low tide of salt marshes and sand, and has the potential for increased recreational use. The old N1 (Dublin – Belfast) has been downgraded to regional route status following the opening of the new motorway to the west, which adds to the landscape quality of the Castlebellingham/Kilsaran area.

Two of the rivers that drain the Muirhevna plain pass through this area before discharging to the sea; viz. The Fane at Blackrock, and the confluence of the Glyde and Dee at Annagassan.

## Landscape Sensitivity

The existing farming practices are unlikely to change. Further removal of hedgerows and stone walls, whilst extending the panoramic views available in the area, would alter the landscape character.

However further diversification in the horticulture sector is possible where there is easy access to Dublin markets. Accommodation for rural tourism can be expected to expand. The expansion of mariculture is possible between Salterstown and Dunany.

The road network in the Dunany area is not capable of sustaining significant increases in physical development in that it would interfere with existing tree cover in the area.

Broadleaf and mixed forestry (30% broadleaf 70% conifer) would be sustainable in this L.C.A. and particularly in the Salterstown-Dunany area.

There is no serious threat to the area for the introduction of further telecommunication masts given the existing coverage in the area.

Windfarms in the present economic energy climate are not likely to emerge in the immediate future due to the low theoretical windspeeds in this area. However, offshore masts may be a possibility in the shallow reaches at Dundalk Bay.

#### Landscape Values & Classification

Ke	y Values	Objective
	Dundalk Bay (S.P.A.) Saltmarsh and mudflats with full range of plant communities. Very important for wintering and migrating wading birds.	Conserve
	Some fine groups of broadleaf trees.	Conserve
-	Impressive coastal routes of high scenic quality.	Conserve/restore
	Dunany Point area where there is a sense of tranquillity due to the low levels of the of the built environment, traffic and noise.	Conserve/restore
	Opportunities for recreational pursuits with particular emphasis on the river edges and coastline.	Conserve/enhance/restore
	Rich in archaeological features.	Conserve
	Landlord village at Castlebellingham.	Conserve/enhance/restore
	Existing hedgerows and stone walls.	Conserve
Ov	erall Classification	Regional

#### 5.15.4 Views and Prospects of Special Amenity Value

A number of specific views and prospects of special amenity value are identified in the Plan and detailed in Appendix 11. **None** of which relate to the subject site.

#### **5.15.5 Green Infrastructure**

The term Green Infrastructure (GI) can describe a network of connected, high quality, multifunctional open spaces, corridors, and the links in between that provide environmental services and multiple benefits for people and wildlife. It is also used to describe a broad range of design measures, techniques and materials that have a sustainable character and have a beneficial environmental impact.

#### 5.15.5.1 Strategic Objectives for Green Infrastructure in County Louth

The strategic objectives for the Green Infrastructure Strategy applicable to County Louth have been derived following a combination of consultation for the strategy, best practise guidelines and SWOT analysis of the county as outlined below:

- Flood risk management and climate change adaptation,
- An ecological framework,
- A sustainable movement network,
- A sense of place,

Dalia

- · River corridor and coastal management,
- Support urban regeneration,
- Community, health and enjoyment.

The Louth County Development Plan 2015-2021 will support the following policies of the Green Infrastructure Strategy:

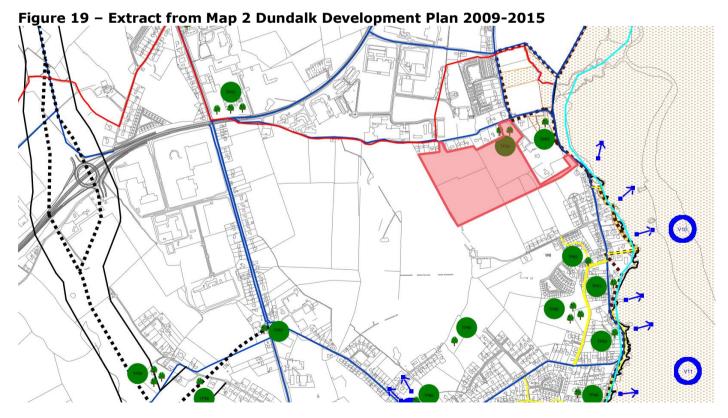
Policy	
HER 65	To support the green infrastructure network of County Louth. To implement the green infrastructure network in any assessment of development proposals to prevent adverse impact on the ecological connectivity of County Louth's core areas.
<u>HER 66</u>	To require the use of the green infrastructure network as a supplementary guide for the protection and conservation of the Natura 2000 sites in County Louth.
HER 67	To utilise all information available on the Louth Baseline Assessment as evidence based decision making in the Louth Core Strategy.
<u>HER 68</u>	To support the existing features of interest in the Level 3 Settlements of County Louth and promote and facilitate any areas identified for green infrastructure enhancement.
<u>HER 69</u>	A minimum of 20m wide riparian corridor shall be kept free from development (except for pathways) along the side of each bank of the river for the purposes of habitat protection, maintenance access requirements, flood alleviation and recreational requirements. Any proposed path should be located a minimum of 6m from the top of the river edge. All proposed coastal walkways will be required to comply with the Habitats, EIA and SEA Directives.
HER 70	Identified stone walls shall be incorporated into the overall development proposals. Where it is not feasible to retain the existing walls at the existing location, proposals submitted shall illustrate the removal and rebuild of the wall at a separate location.
HER 71	To provide a detailed green infrastructure network for Dundalk, Drogheda, Ardee and Dunleer integrated into the local area plan for each area.
HER 72	To require future development proposals to integrate into the overall design any important biodiversity features including those listed in Table 16 (Green Infrastructure Strategy, Appendix 14, Volume 2(b) into the overall design.
HER 73	To require development proposals to include native planting schemes in landscaped areas and open spaces.
HER 74 HER 75	To require the integration of Green Infrastructure in all areas of public space. To require the integration of climate change mitigation measures in any future spatial plans and climate change adaptation measures in proposed developments.

# 2 Existing Trees

With the exception of a small number of hedgerows trees incorporated into an existing field boundary running though the centre of the site, the only notable trees within the subject site are located in the Northeastern corner adjoining Bothar Maol.

This cluster is identified in figure 18 below (green) and also identified and recorded within the Dundalk Development 2009-2015 as TP54 (Figure 19 below)





An inventory and survey of trees within the urban area of Dundalk was undertaken in the year 2000. The report documented approximately 1,172 trees in the urban area, including a condition survey and recommended treatment. The report recommended the making of tree preservation orders to protect trees in the town.

Subsequently within section 8.2.6 'Tree Preservation Orders' (TPO)of the Dundalk Development plan 2009-2015 Dundalk Town Council and Louth County Council highlight that they seek 'to protect trees, groups of trees and areas of woodland where they have natural heritage value or contribute to the character or amenity of a particular locality.' Setting out the policy below to achieve this:-

Policy CH5

Seek the protection of important trees and groups of trees within the plan area and require that designers take into considerations the protection of trees in the design of new developments. Require replacement trees at a ratio of 4:1, and of native species, where the removal of trees is required in order to facilitate the development.

Make Tree Preservation Orders for the 64 trees and groups of trees identified in Appendix 6.

Appendix 6 of the Dundalk Development Plan 2009-2015 relates to a Tree Survey of Dundualk, conducted by Tom Kilkenny, 26 May 2004

The report was based on a review of the 2000 survey of trees within Dundalk town and environs to identify those trees in the area which would be suitable subjects for Preservation Orders because of their outstanding appearance or rarity of occurrence in the district.

In relation to the subject site and group TP54 the updated 2004 report stated:-TP 54 Bothar Maol Group of Sycamore, Ash, mature, fair condition. No great value. Whilst this cluster were not considered valuable enough on to apply TPO or designations, in the context of the site and the proposed development it was considered of value, therefore has been proposed for protection and retention.

Louth County Development Plan 2015-2021 makes no reference to this group of trees under section 5.8 – Trees, Woodlands and Hedgerows ( see policy extraction in section 1 above)

NOTE: Post commencement of this project a number of trees in this location were felled by third parties with the timber removed off site without the applicants knowledge or consent.

This criminal act has been reported by the applicant to the Garda.

Appendix 1 of this report included an up to date tree survey cross the application site.

# 3 Proposed Development Landscape Character Areas

The proposed development character areas identified below are designed to provide appropriate outline guidance for the sites architectural and urban response

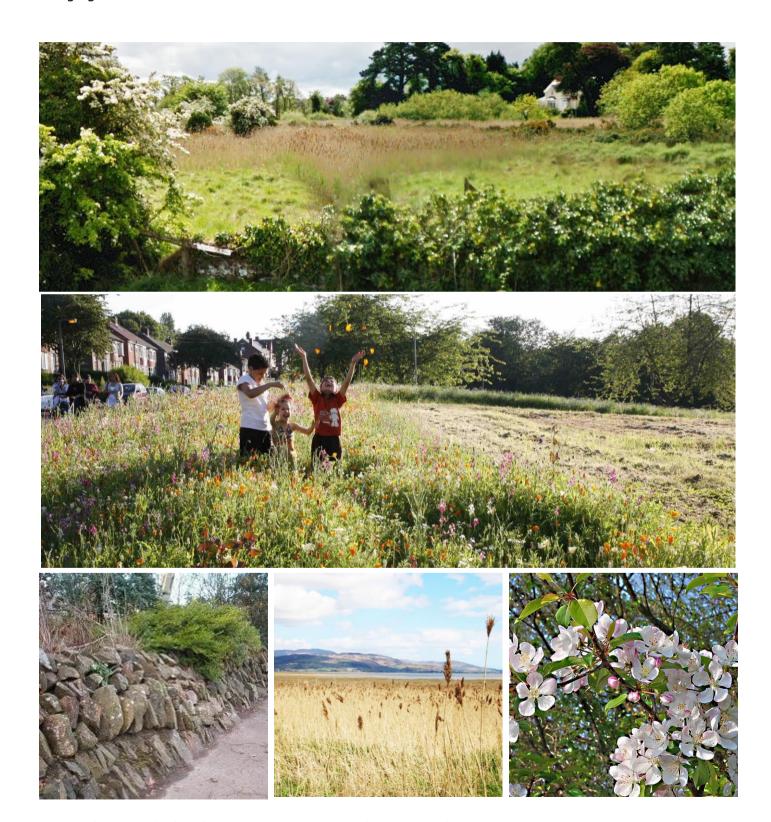
Figure 20 - Development Character Areas mullin design associates Whilst the character area 'Cooley View' will form the main This character area will also form a 'Gateway' to the development. The lands adjacent to the east, are where the this form character and valued as the east, are where the this form character and so the east are where the this form character as a condition of the east are where the this form of gardens associated with the development site lands are located. There is valuable maturity in this area formed Wetland - Coastal feel Willow/ Poplar/ Alder / Ponds/ wales / Reeds/ Wetland Grasses. / Oak / Hombeam here is potential to utilise and extend this existing vehicular access into the development site. mature trees and vernacular buildings. landscape character into the site. Landscape Qualifies: Cooley View Mill End This would be the most extensive character area within the development, occupying the core central space from which the other character areas integrate. It is dominate ntalised by hedges, Through careful planting - housing overlooking this central space will not dominate, being partially screened, whilst maintaining a sufficient role in overlooking for passive from agricultural landscape such as (hedges, Louth bank walls, swales and ditches This character area would maintain a structured yet natural feel – taking reference Whilst there will be higher maintenance – amenity/play interventions throughout the space, the overall character and feel will be informal & flowing. water through Landscape Qualities : Hedgerows to create Field and meadow feel, interspersed with copies of native trees and accordin feature estate trees. Oak I, Accel I Villiaw Poplarl, Alder I Ponds Swales I Reeds! Wetland Grasses / Meadow Hedgerows . / Louth Bank Walls / to be considered for areas requiring low leve Field Garden hedging to include Hombeam / Hawthorn / Privet and Holly frees and Louth fences into a series of smaller enclosures & meadows. swales and landform to the north east and creating valuable habitat. SUDs will also play an important role in this area, directing surface by a large area of zoned open space that would be compartme **Bothar Maol** he Birches surveillance and sense of ownership. Cooley View This character area forms the main 'Galeway' to
This character area forms the main 'Galeway' to
the lie. This vehicular access road will affer
excellent views in a North easterty direction of Hedging to include Hombeam - Hawthom - Fushia This is a reasonably sheltered part of the site and will therefore accommodate a wider variety of species including flowering trees and hedges. eels like an extension to the existing residential candscape Qualities: External site boundaries einforced with traditional agricultural hedgero species i.e Hawthorn / blackthorn etc Strong landscape buffer between the existing area. Whilst it would be impractical to mirror the density of Bother Maol itself (1.e Detached ndividual feel in this area both in architectural Dundalk Bay & the Cooley Mountains beyond The vertical alignment of this road is importan SUDs will also play an important role in this character area, with surface water utilised to Landscape Qualities: Wetland - Coastal feel to be considered for areas requiring low level Ultimately the aim is to create an area which existing feel along Bothar Maol which is a we should still be possible to create a bespoke Reeds/ Wetland Grasses. / Louth Bank Walls This character area responds & respects the hed low density suburban residentia Sarden boundaries would be a mixture of It should be noted that excellent glimpsed towards the Bay & Cooleys may be achieved from many of the proper with contrasting birch and hornbeam As the land rises subtly in the direction of the Golf Course, the site character will also change. As the name suggests this area will respond to the existing coniter planting associated with the Golf Course raditional agricultural hedgerow species properties with large individual gardens). eflect the estuarine landscape beyond. Willow/ Poplar/ Alder / Ponds/ Swales / and the slightly higher and drier land. As with Cooley View - there is potential External site boundaries reinforced with Landscape Qualities: - Clusters of Pine Sarden boundaries would typically be .e Hawthorn / blackthorn / elder etc properties along Bothar Maol evergreen Griselinia & Privet and landscape terms. area of Bothar Maol Birches & Pines nedging solutions. **Bothar Maol** 

# **Cooley View**

This character area forms the main 'Gateway' to the site. This vehicular access road will offer excellent views in a North easterly direction of Dundalk Bay & the Cooley Mountains beyond. The vertical alignment of this road is important.

SUDs will also play an important role in this character area, with surface water utilised to reflect the estuarine landscape beyond.

Landscape Qualities :- Wetland - Coastal feel Willow/ Poplar/ Alder / Ponds/ Swales / Reeds/ Wetland Grasses. / Louth Bank Walls to be considered for areas requiring low level retention Hedging to include Hornbeam - Hawthorn - Fushia.



Haggardstown, Blackrock - Landscape Strategy / Design Code,

#### **Birches & Pines**

As the land rises subtly in the direction of the Golf Course, the site character will also change. As the name suggests this area will respond to the existing conifer planting associated with the Golf Course and the slightly higher and drier land. As with Cooley View - there is potential for excellent views.

Landscape Qualities :- Clusters of Pine trees with contrasting birch and hornbeam. External site boundaries reinforced with traditional agricultural hedgerow species i.e Hawthorn / blackthorn / elder etc

Garden boundaries would typically be evergreen Griselinia & Privet.

It should be noted that excellent glimpsed views towards the Bay & Cooleys may be achieved from many of the properties in this area



Haggardstown, Blackrock - Landscape Strategy / Design Code,

#### Meadow & Field-

This would be the most extensive character area within the development, occupying the core central space from which the other character areas integrate. It is dominated by a large area of zoned open space that would be compartmentalised by hedges, trees and Louth fences into a series of smaller enclosures & meadows.

Through careful planting - housing overlooking this central space will not dominate, being partially screened, whilst maintaining a sufficient role in overlooking for passive surveillance and sense of ownership.

This character area would maintain a structured yet natural feel – taking reference from agricultural landscape such as (hedges, Louth bank walls, swales and ditches)

Whilst there will be higher maintenance – amenity/play interventions throughout the space, the overall character and feel will be informal & flowing.

SUDs will also play an important role in this area, directing surface water through swales and landform to the north east and creating valuable habitat.

Landscape Qualities :- Hedgerows to create Field and meadow feel, interspersed with copses of native trees and occasion feature estate trees.

Oak / Acer / Willow/ Poplar/ Alder / Ponds/ Swales / Reeds/ Wetland Grasses / Hedgerows / Louth Bank Walls / to be considered for areas requiring low level retention Garden hedging to include Hornbeam / Hawthorn / Privet and Holly





#### **Bothar Maol -**

This character area responds & respects the existing feel along Bothar Maol which is a well established low density suburban residential area. Whilst it would be impractical to mirror the density of Bother Maol itself (I.e Detached properties with large individual gardens). It should still be possible to create a bespoke individual feel in this area both in architectural and landscape terms.

Ultimately the aim is to create an area which feels like an extension to the existing residential area of Bothar Maol.

Landscape Qualities :- External site boundaries reinforced with traditional agricultural hedgerow species i.e Hawthorn / blackthorn etc

Strong landscape buffer between the existing properties along Bothar Maol Garden boundaries would be a mixture of hedging solutions.

This is a reasonably sheltered part of the site and will therefore accommodate a wider variety of species including flowering trees and hedges.







Haggardstown, Blackrock - Landscape Strategy / Design Code,

#### Mill End -

Whilst the character area 'Cooley View' will form the main vehicular access into the development site.

This character area will also form a 'Gateway' to the development. The lands adjacent to the east, are where the historic farmstead, outbuildings (incl threshing mill) and gardens associated with the development site lands are located. There is valuable maturity in this area formed by mature trees and vernacular buildings.

There is potential to utilise and extend this existing landscape character into the site.

# Landscape Qualities :-

Wetland - Coastal feel Willow/ Poplar/ Alder / Ponds/ Swales / Reeds/ Wetland Grasses. / Oak/ Hornbeam, Walled enclosures - Stone







# 4 Materials

The streetscape elements and surface palette have been selected to complement the architectural style, texture and colour of proposed buildings.

Materials Palette (Hardscape	)	S
Material Application	Material Description	Material Appearance
Streets  Carriageway Surfacing (Main)	Stone Mastic Asphalt - Black Stone Chips - Buff or Light Chips Stone (10- 14mm) Construction to Highways approval	
Streets  Carriageway Surfacing (Rumble Strips And deterrent surfacing as required)	Tumbled silver grey concrete setts 100mm depth x 100x150mm (+-10mm)  Granite effect setts laid perpendicular to roadside kerb. Light grey tones with granite aggregate.  Stretcher bond  Construction to Highways approval	
Streets  Carriageway Surfacing (Drainage Channels)	3 rows of 100 depth x 100 x 150mm (+- 10mm) tumbled silver grey granite effect concrete setts laid parallel with roadside kerb.  Light or Dark grey tones as with rumble finish.  Stretcher bond  Construction to Highways approval.	

Material Application	Material Description	Material Appearance
Carriageway Surfacing (Parking Bays and Shared surface areas)	Concrete Sett paving such as 'Tegula' or similar approved.  80 depth x various sizes. Typical acceptable gauges (widths) 130, 165 or 240mm (+-10mm)  Grey tones only (No Red or Pink tones)  Stretcher bond in random courses Soldier bond edging course  Construction to Highways approval.	
Main Carriageway Kerbs	Silver grey granite effect concrete kerb.  Square edged exposed granite aggregate surface emulating the appearance of traditional granite kerbs.  255mm x 145mm x 915mm (+-20mm)	
Footpath Surfacing - (Bothar Maol – Cycleway )	Resin bound pea gravel  Buff/brown coloured Graded 1-3mm aggregate.  Specification and Construction to Highways approval.	
Footpath Surfacing - Main Option 2	Poured insitu concrete or paving slabs 65mm depth x 400 x400mm textured paving units Grey & Brown tones (No Pinks). Stretcher and/or Stack bond	

# Materials Palette (Softscape)

#### **Material Application**

#### **Material Description**

#### **Material Appearance**

Large Park and Street Trees

Large growing tree species should be limited and only considered in areas along primary roads which have capacity to accommodate them

For example at points along a road or at the end of a primary road where it opens into a large public space.

They will have the effect of reducing and humanizing the spatial scale of these wider Large Street Tree Species.

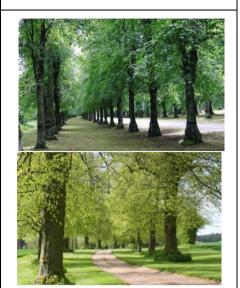
- Tilia x europaea 'Pallida' (Lime)
- Ouercus Robur (Oak)

Rootballed trees planted as Extra Heavy Standard to Semi Mature size to be hand selected for purpose and tagged.

Tree support to be approved concealed deadman ground anchors system or 1No. 75mm dia smooth turned & tanalised larch or pine stake 3.6m long, pointed at one end and stained off site with 2 coats of dark brown solignum stain. Top neatly trimmed to finished height surformed and stained as rest of stake.

2No. Tom Ties and spacers (L1 Pad and Belt)

Stake to be positioned on windward side of tree.



#### Medium Street Trees

Large growing tree species should be limited and only considered in areas along primary roads or opens spaces which have capacity to accommodate them.

For example at points along a road or at the end of a primary road where it opens into a large public space.

They will have the effect of reducing and humanizing the spatial scale of these wider spaces.

Medium growing tree species will be the predominant size - fastigiated trees should be considered in proximity to taller buildings

It is envisaged that trees along these roads will be located in short verges / planters separating on-street parking bays.

Alternatively they would be located in the footpath with tree grille and guard arrangement.

Medium Street Tree Species.

- Tilia x euchlora (Lime) Carpinus Betulus 'Fastigia' (Hornbeam)
- Prunus avium ' Plena' (Cherry)

Rootballed trees planted as Extra Heavy Standard to Semi Mature size to be hand selected for purpose and tagged.

Single tree species for each identifiable





#### Small Street Trees

These smaller trees have been selected for their texture, colour and habit. They should be placed within or adjacent to buildings, in both private and shared garden space in the ground or in planters.

Their introduction will improve air quality, and microclimate within the street. In addition, the scale of these spaces will be reduced creating a more pedestrian/residential quality.

Single tree species for each identifiable

#### Species include:

- Betula utilis jacquemontii (single or multi-stem) Himalayan Birch
- Amelanchier canadensis Serviceberry
- Carpinus betulus 'frans fontaine' Fastigate Hornbeam
- Crategus Spp
- Pyrus calleryana 'Chanticleer'



Materials Palette (Softscape					
Material Application	Material Application	Material Application			
Hedging  Clipped hedging is a very effective natural screen and boundary. As a living material it improves air quality and creates potential habit/shelter for nesting birds. In a streetscape environment, they soften the visual appearance, screen parked cars, bins etc and define spaces for sitting or playing. With appropriate species selection they can create attractive colour, texture, form and seasonal variation.	Hedging Species  Carpinus betulus (Hornbeam)  Acer campestre  Crategus monogyna  Privet				
Groundcover and Shrubs  These plant types are used to create focal points through the area. They can be used at junctions and points of reference to assist orientation, and as feature planting to create spatial definition and visual variation.  Along Streets, trees and shrubs will be accommodated in planters and plant beds protected by upstand kerbs.	Groundcover and Shrub Species  There are numerous appropriate species, however the palette should be limited to avoid over complication both visually and in terms of maintenance requirements. Species should generally be frost hardy and low maintenance, although herbaceous and perennial species can be considered as feature bedding planting.  Typical Species examples include:  Cornus spp Viburnum spp Hedera Helix Hibernica Vinca Major Genista Lydia Lavandula angustifolia Hidcote Perovskia atriplicifolia Amelanchier spp				
Wildflower and Species Richs Grassland Selected Mixes of native wildflower and Grasses appropriate to the soil and climatic conditions – to be confirmed with project Ecologist.					

# Typical Plant Schedules appropriate for this site

#### Schedule 7- WILDFLOWER MIX

%	SPECIES	COMMON
75	Cynosurus cristatus Festuca rubra ssp litoralis Festuca arundinacea Centaurea nigra	Crested Dogstail Slender Creep.Red Fesc. Tall Fescue
23	Chrysanthemum segetum Hypochoeris radicata Leucanthemum vulgare Lotus ulignosus Lychnis flos-cuculi Papaver rhoeas Plantago lanceolata Prunella vulgaris Ranunculus acris Rhinanthus minor Rumex acetosa Silene diocia Succisa pratensis Vicia cracca	Corn Marigold Cat's Ear Ox-eye Daisy Marsh Trefoil Ragged Robin Corn Poppy Ribwort Plantain Self-Heal Meadow Buttercup Yellow Rattle Common Sorrel Red Campion Devil's Bit Scabious Tufted Vetch

## **PLANT SCHEDULES**

Schodule 1	- AVENUE 8	SPECIMEN	TREES
Schedule 1	- AVENUE O	X SEECHVIEN	INCLES

As Shown

KE'	Υ	SPECIES	COMMON	SIZE (girth)	GROW	HABIT
$\odot$	QR	Quercus robur	Oak	18-20cm	BR	Clear Stem
$\odot$	QR'F	Quercus robur 'Fastigiata'	Oak - Columner	18-20cm	BR	Clear Stem
$\odot$	Cb'ff'	Carpinus betulus (Frans Font)	Hornbeam	18-20cm	BR	Clear Stem
$\odot$	TC'G'	Tilia cordata 'Greenspire'	Lime	16-18cm	BR	Clear Stem
$\odot$	AP'C'	Acer platanoides 'Crimson K'	Norway Maple	16-18cm	BR	Clear Stem
$\odot$	SAT	Salix alba 'Tristis'	White Willow	16-18cm	BR	Clear Stem
$\odot$	AG	Alnus glutinous	Alder	16-18cm	BR	Clear Stem
$\odot$	BP	Betula pendula	Birch	16-18cm	BR	Clear Stem
$\odot$	SA	Sorbus aucuparia	Mountain Ash	16-18cm	BR	Clear Stem
	MD	Malus domestica	Apple	12-14cm	BR	Clear Stem
12.	PA'P	Prunus avium 'P'	Wild Cherry	12-14cm	BR	Clear Stem
	НМ	Hamamelis mollis	Witchhazel	6-8cm	BR	Branched
	AC	Amelanchier canadensis	Shadbush	10-12cm	BR	Clear Stem
	PS	Pinus sylvestris	Scots Pine	16-18cm	BR	Branched
*	PM	Pinus mugo	Dwarf Pine	6-8cm	BR	Clear Stem

#### Schedule 2 - TYPICAL SHRUB/ GROUNDCOVER

Ave Density 5 No. Plants Per m2

KEY	SPECIES SIZE (g		NO.m2	HABIT	
Sp	Stipa 'Pony Tails'	PG 5L	4/m2	Bushy	
Cs	Cornus sanguinea	PG 3L	3/m2	Branched (3)	
Pf	Photinia x fraseri' red robin'	PG 3L	3/m2	Branched (3)	
Pc	Echinacea purpurea	PG 3L	3/m2	Branched (3)	
Pa	Pennisetum×advena 'Rubrum'	PG 3L	3/m2	Branched (3)	
Ct	Choisya ternata	PG 5L	3/m2	Bushy	
Hh	Hedera helix 'hibernica'	PG 3L	6/m2	Sev Shoots	
Vm	Vinca major	PG 3L	6/m2	Bushy	
На	Hebe albicans	PG 3L	6/m2	Bushy	
Hm'A	Hakonechloa macra Alboaurea	PG 3L	6/m2	Branched (3)	
Се	Carex elata 'Aurea'	PG 3L	6/m2	Bushy	
Hf	Heuchera 'Fire Chief'	PG 3L	5/m2	Branched (3)	
Wn	Weigela nain rouge	PG 3L	4/m2	Bushy (3)	
Cc	Caryopteris x clandonensis	PG 3L	5/m2	Bushy (3)	
La	Lavandula angustifolia	PG 3L	4/m2	Bushy	
	Cistus 'Silver Pink'	PG 3L	4/m2	Bushy	

#### Schedule 3 - CLIPPED HEDGE OPTIONS

6 plants per m2 - Staggered Rows c400mm

	SPECIES	COMMON	SIZE	GROW	HABIT
Се	Carpinus betulus	Hornbeam	60-90cm	BR	Feathered
GI	Griselinia littoralis	NZ Kapula	60-90cm	BR	Feathered
Lv	Lugustruim vulgaris	Privet	60-90cm	BR	Feathered
Tb	Taxus baccata	Yew	60-90cm	BR	Feathered
Fr	Escallonia rubra ' Crimson'	Escallonia	60-90cm	BR	Feathered

# Schedule 4 - TYPICAL CLIMBING SPECIES Ave 3 No. Plants Per Lin M

KE	Υ	SPECIES		SIZE (girth)	NO.m2	HABIT
***	Cs	Hydrangea petiolaris	Hydrangea	PG 3L	3/m2	Branched (3)
***	Pf	Lonicera periclymenum	Honeysuckle	PG 3L	3/m2	Branched (3)
***	Рс	Pyracantha coccinea	Firethorn	PG 3L	3/m2	Branched (3)

#### Schedule 5 - WOODLAND / WOODLAND EDGE MIX 0.5 plants per m2 or 5000 plants per Ha

%	SPECIES	COMMON	SIZE	GROW	HEIGHT/TRAN
20	Quercus robur	Oak	40-60cm	CG	1 + 1 Branched
20	Crataegus monogyna	Hawthorn	40-60cm	CG	1 + 1 Branched
10	Alnus glutinosa	Alder	40-60cm	CG	1 + 1 Branched
10	Ilex aquifolium	Holly	40-60cm	CG	1 + 1 Branched
5	Coryllus avellana	Hazel	40-60cm	CG	1 + 1 Branched
10	Pinus sylvestris	Scots Pine	40-60cm	CG	1 + 1 Branched
5	Prunus avium	Cherry	40-60cm	CG	1 + 1 Branched
10	Betula Pendula	Birch	40-60cm	CG	1 + 1 Branched
5	Viburnum opulus	Guelder- Rose	40-60cm	CG	1 + 1 Branched
5	Fagus sylvatica	Beech	40-60cm	CG	1 + 1 Branched

#### 2 plants per linear m2 Schedule 6 - TYPICAL HEDGEROW /MIX

%	SPECIES	COMMON	SIZE	GROW	HEIGHT/TRAN
75	Crataegus monogyna	Hawthorn	40-60cm	CG	1 + 1 Branched
10	Coryllus avellana	Hazel	40-60cm	CG	1 + 1 Branched
5	Ilex aquifolium	Holly	40-60cm	CG	1 + 1 Branched
5	Prunus spinosa	Blackthorn	40-60cm	CG	1 + 1 Branched
5	Frangula alnus	Alder Buckthorn	40-60cm	CG	1 + 1 Branched

Material Application	Material Description	Material Appearance
Street furniture throughout should be coordinated and visually consistent. It should be physically robust and of simple dimension and form.  The basic palette of material should be restricted to timber; natural stone/ textured concrete in basic combination with minimal use of metals. Dimensions of furniture should be generous and should avoid over elaborate and fussy detail.  Benches	Bench dimensions to be designed to acceptable ergonomic proportions.  The design to accommodate back support as an option. Material to be hardwood with bullnose edge, and grey granite or silver grey exposed granite aggregate concrete.  Approx dimensions: 3000mm length 600mm width 440mm high	P
Benches to be distinct and potentially unique. To be constructed in timber, stone and/or textured concrete. Dimensions / proportions of seating to be generous. Final form designed to be robust and simple, avoiding over elaboration and ornamentation, however should always be comfortable and inviting for use.		p
As with benches any bollards or markers used in the area to be distinct and potentially unique. They should to be sturdy and robust in construction and appearance. Bollards to be constructed of timber, stone or textured concrete. Materials to be of generous dimensions and with minimum decoration. Colour of natural stone or concrete in buff, browns and greys (No Pink tones). Wood to be hard wood such as kiln dried Oak.	Bollards  Approx dimensions: 150mm width (top) 250 x 250mm width (base) 900mm high	
LitterBins  Bin design is an integral part of the street furniture suite and should complement other elements. It is essential for maintenance and management purposes that bins throughout are consistent in design terms so that waste management is kept as simple as possible. It is impractical to have a variety of locks, keys, and basket sizes etc, therefore consistency of design is very important. As with the other furniture items the colour selection should be browns (wood) and grey tones.	Woodscape Ltd Church Works Church Street Lancashire BB5 4JT t: 01254 383322 Or similar approved	

Material Application	Material Description	Material Appearance
ghting throughout as with the oposed street furniture should be ordinated and visually consistent. e design should be physically robust d of simple dimension and form oiding over elaboration / namentation.  Edium Level Lighting ordinates will have reduced column sizes, in max  Jumns to be tapered, with straight acket or curved column.	Column mounted, top post luminaire to be Tech series LED or similar approved.  Used extensively and successfully throughout Ireland on local authority adopted streetscapes.  Refer to project Lighting report for further detail.	
Chese medium sized light columns will be introduced at feature locations along primary paths such as the central park.  Whilst the style of these ight can be contrasting to the main columns the inish should be consistent in galvanised, cast aluminium and polyester-coated stove black.	Medium Level Lighting  Indirect luminaire, ideal for use in pedestrian spaces using ceramic discharge lamps up to 150 watts. IP65, cast aluminium housing, black finish with solid roof.  To be used in high profile areas.  Woodhouse Geo Parklight Symmetric (G-LA 42 10 0)  Parklight Symmetric with 70 w HCI-T lamp Cast aluminium lantern body Pole top fixation IP65 lamp and gear compartment To suit pole diameter 114mm Lantern height 1120mm Finish: Powder coated silver RAL 9006 Underside reflector colour – white  5m tapered columns, finished in a standard black	1120
Feature Lighting  Low (Bollard Lighting)  Bollard lighting on pedestrian areas and junctions and should be constructed from cast steel or stone.  Alternatively lighting could be integrated into other street furniture such as benches.	Ground based uplighters and other feature lights can be utilised to illuminate planters and or street trees at locations of particular public interest such as squares and wider junction areas.	
mensions of bollards should be of nerous dimensions and avoid over aborate design.  cal points and detail areas may quire specialised lighting (floodlit, up or mood). These should be discreet d easily maintained, Yet robust in ture for public realm.	The same of the sa	

# 5 LAPS, LEAPS & NEAPS

## LAPS (Local Area Play)

This is a small area of open space specifically designated and laid out for young children. It will usually contain features rather than play equipment and is designed to encourage informal play and social interactions. E.g. shaped wooden seats designed for small children.

## **LEAP (Local Equipped Area for Play)**

This is an area of open space that is designated and equipped for children of early school age. It will include some play equipment designed to stimulate social play e.g. small-scale adventure playground and some open space.

CHILDREN'S PLAY AREAS					
Local Area for Play (LAP)	Local Equipped Area for Play (LEAP)				
Location and scale:					
Within 100m walking distance of every family dwelling. 100m5 of play area with a minimum distance of 5 metres between the edge of the play area and ground floor windows of any property.	Within 400m walking distance of every family dwelling. 400m5 of play area with a minimum distance of 10 metres3 between the edge of the play area and the boundary of any residential property.				
Users:					
Toddlers to 6 year olds. Should be accessible by children (and carers) with disabilities such as mobility and sensory problems and suitable for their use.	4 to 8 year olds. Should be accessible by children (and carers) with disabilities such as mobility and sensory problems and suitable for their use.				
Conditions:					
Reasonably flat, or with small feature earthworks, well-drained with grass and/or hard surface.	Reasonably flat, and/or feature earthworks with well-drained with grass and/or hard surface.				
Contents:					
Appropriate for informal low-key use and games such as tag, hopscotch, or play with users own small toys. Play features should be designed to encourage use within target age group. Should have seating for carers. Where boundary to a play area is not secure for example adjacent to a carriageway, guard rail and or hedging (600mm high) around site with offset entry/exit point where adjoining any area used by vehicular traffic. Display of 'No dogs' and and target user age group sign. Dog gates or grids should be introduced.					
Appearance:					
Landscape features to enhance the development including tree planting and low level planting including hedging behind guard rail. Gable end or other exposed house walls should be protected from use for ball games by providing strip of dense planting.	Landscape features to enhance the development including tree planting and low level planting behind guard rail.				

The siting of play space should evolve as part of the whole development process and should be designed as an integral part of the housing layout. The following factors will need to be considered:-

- play space should be located to allow informal supervision from nearby houses or from well used pedestrian routes;
- open, and/or south facing locations should be provided, not backland sites with accesses along high-fenced narrow alleyways;
- preferably children should not need to cross major hazards such as roads;
- sites should be separated from areas of major vehicle movements and preferably accessible directly from pedestrian routes;
- where children will need to cross a minor road within the residential development to access a play space, traffic calming measures should be employed, such as a change in the road surface;
- every effort should be made to avoid locating play space near high voltage electricity cables and substations;
- where both a LAP and a LEAP are provided as part of a housing development, there should remain a clear separation between them to allow for the two separate functions; and
- to provide maximum separation from nearby residents, sites should be linked, as far as possible, with other open spaces, footpath systems and planting areas.

# LAPS (Local Area Play)























**LEAP (Local Equipped Area for Play)** 













**LEAP (Local Equipped Area for Play)** 



Haggardstown, Blackrock - Landscape Strategy / Design Code,

MDA 18

### 6 SUDS

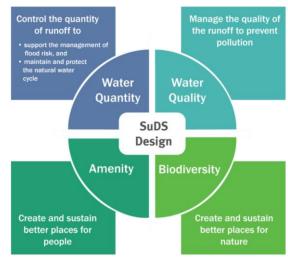
Sustainable drainage systems (SuDS) are a natural approach to managing drainage within developments - Subject to soil percolation testing, a SUDs approach is proposed for this development.

SuDS work by slowing and holding back the water that runs off from a site, allowing natural

processes to break down pollutants.

### The benefits of SuDS are:

- preventing water pollution
- slowing down surface water run-off and reducing the risk of flooding
- reducing the risk of sewer flooding during heavy rain
- recharging groundwater to help prevent drought
- providing valuable habitats for wildlife in urban areas
- creating green spaces for people in urban areas.



### Typical SuDS Installations

SuDS systems vary from infiltration trenches/soakaways, filter drains and permeable pavements to swales, detention basins and stormwater wetlands. Other options which can also be used to assist stormwater runoff control include water-reuse, roof water collection (water butts) and rooftop gardens.

Typical examples of SuDS installations and the way they operate are as follows:

### • Permeable Pavements

Use of porous asphalt, porous paving or similar concepts to reduce imperviousness thus minimising runoff. Runoff infiltrates to a stone reservoir where some breakdown of pollutants occurs before controlled discharge to a drain or watercourse or direct infiltration.

### Filter Drains

A gravel filled trench, generally with a perforated pipe at the base which conveys runoff to a drain or watercourse. These provide attenuation and trap sediments.

### • Infiltration Trenches/ Soakways

Gravel or rock filled pits or trenches designed to store runoff while letting it infiltrate slowly to the ground. Provide treatment of runoff through filtration, absorption and microbial decomposition.

### Bio-Retention

These devices are depressions back filled with sand and soil and planted with native vegetation. Provide filtration, settlement and some infiltration. Piped drainage provided at the base to pipe filtered runoff back to the drainage system or watercourse.

### Swales

Grass lined channel designed to convey water to infiltration or a watercourse. Delays runoff and traps pollutants via infiltration for filtering effects of vegetation.

### • Detention Basins

Dry vegetated depressions which impound stormwater during an event and gradually release it. Mostly for volume control but some pollutant removal achieved via settlement of suspended solids and some infiltration.

### Retention Ponds

Permanent water bodies which store excess water for long periods allowing particle settlement and biological treatment. Very effective for pollutant removal but limited to larger developments. Have high habitat and aesthetic benefits.

### Stormwater Wetlands

Like retention ponds but with more vegetation and less open water area. Excellent for pollutant removal. Also provide aesthetic and habitat benefits.









Haggardstown, Blackrock - Landscape Strategy / Design Code,

### 7 Homezones

The concept of Homezones is proposed in the residential areas to introduce measures that serve to put the vehicle user and pedestrian on an equal footing, thus providing a shared surface for vehicles, pedestrians, cyclists and children allowing for more productive use of the public open space and, in effect, turning local streets into recreational areas.

Using planters, street lighting and trees, benches and other structures, streets are modified to have one surface running throughout from one side to the other, without level changes, kerbs or walls. Traffic is controlled by carefully placed obstacles which impede the fast movement of vehicles, overtaking or bi-directional flow of vehicles down the street. This makes the streets safer and quieter for inhabitants in nearby dwellings, can cut down on ratrunning, reduces traffic flow to that of local residents only, provides a quiet area for kids to play, cycle and run around and also allows for greater scope for streetscaping and area improvements such as tree planting, the installation of attractive street furniture or public artworks and, in some cases, actually lead to increased property values.

The recommended maximum vehicular speed within a homezone is 5-10mph, such speed restrictions mean that those who use them drive carefully and at appropriate speeds.









Haggardstown, Blackrock - Landscape Strategy / Design Code,

Follow exploration of options, the example below was selected as a typical approach to the Homezones within this development. This solution would incorporate a shared surface approach, feature planting, incidental play where space allows, and accommodating 2No. car parking spaces per unit. Bitmac with Setts edging 400x400 conct

Haggardstown, Blackrock - Landscape Strategy / Design Code,

<b>HOMEZONE Materials Palette</b>	(Hardscape)	
Material Application	Material Description	Material Appearance
<u>Homezones</u> Carriageway Surfacing (Main)	Hot Rolled Asphalt - Black Stone Chips - Black Chips Stone (10-14mm) Construction to Road Authority approval	
Homezones  Carriageway Surfacing (Rumble Strips And deterrent surfacing)	Tumbled silver grey concrete setts 100mm depth x 100x150mm (+-10mm)  Granite effect setts laid perpendicular to roadside kerb. Light grey tones with granite aggregate.  Stretcher bond  Construction to Road Authority approval	
Homezones  Carriageway Surfacing (Drainage Channels)	3 rows of 100 depth x 100 x 150mm (+- 10mm) tumbled silver grey granite effect concrete setts laid parallel with roadside kerb.  Light or Dark grey tones as with rumble finish.  Stretcher bond  Construction to Road Authority approval	
Homezones Parking Bays	Concrete Sett paving such as 'Tegula' or similar approved.  80 depth x various sizes. Typical acceptable gauges (widths) 130, 165 or 240mm (+-10mm)  Grey tones only (No Red or Pink tones)  Stretcher bond in random courses Soldier bond edging course  Construction to Road Authority approval	
Main Carriageway Kerbs ( Flush or Upstand)	Silver grey granite effect concrete kerb.  Square edged exposed granite aggregate surface emulating the appearance of traditional granite kerbs.  255mm x 145mm x 915mm (+-20mm)	

# 8 Healthy Places Open Space, Cycleways & Connections

The term 'Healthy Places' describes places designed to promote good health and wellbeing. Well-designed places and landscapes have the ability to deliver positive results for people's physical and mental health.

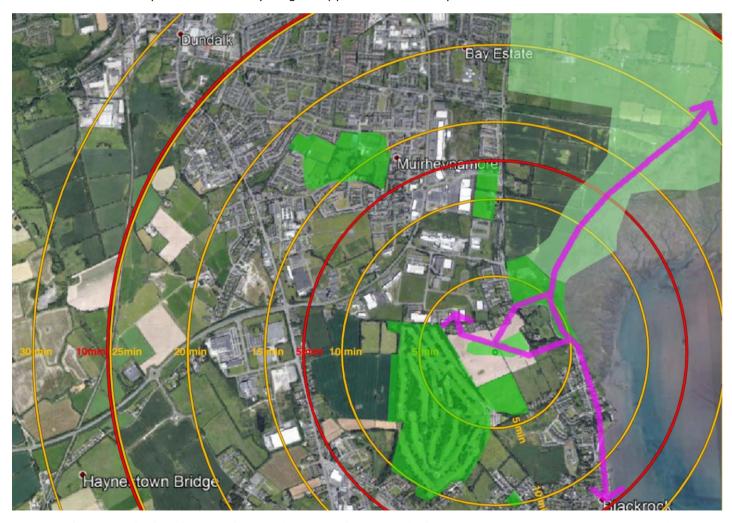
Within the Landscape Institutes position statement 'Public Health and Landscape: creating healthy places', are five benefits healthy places/ landscape deliver:

- Healthy places improve air, water and soil quality, incorporating measures that help us to either adapt to climate change or mitigate its impact on us.
- Healthy places help overcome health inequalities and promote healthy lifestyles.
- Healthy places relax people, increase social interaction and reduce anti-social behaviour, isolation and stress.
- Healthy places optimise opportunities for working, learning and development.
- Healthy places are restorative, uplifting and healing for both physical and mental health conditions.

A core objective from the outset of this project has been to design a new healthy living environment with accessible open space both within the site and beyond to the wider context.

Bothar Maol was a history right of way and believed to be part of the route of Táin Bó Cúailnge, however it is currently not officially open to the public, however subject to agreements it was identified early in the design process that it offered an excellent opportunity as a vehicle free greenway and potential tourist attraction. This figure below illustrates the average walking & cycling time/distance to and from the centre of the subject site:

- Yellow circle represents 5min walk @ approx. ave 5Km per hour
- Red circle represents 5min cycling @ approx. ave 15km per hour



As well as walking and casual cycling distances, the figure also illustrates how well positioned the subject site is relative to lands zoned within the Dundalk & Environs Development Plan 2009–15 for:

- 1 Recreation, Amenity and Open Space (Dark Green)
- 2 Strategic Recreation (Light Green)

In July 2018 the first section of the 'Great Eastern Greenway' opened between Newry and Carlingford – The longer term ambition is to extend this strategic route on to Dundalk and potentially along the coast to Blackrock.

On the previous figure, the magenta route indicated along the coast, illustrated the potential route of this long distance greenway.

Combined with the opportunity to open a new greenway along the length of Bothar Maol, the site would be well placed to take advantage of these strategic sustainable corridors.

Within the subject site the large area of zoned Class 2 open space would be delivered as an attractive park with opportunities for active and/or passive recreation and amenity.

Along with other proposed pocket parks within the subject site, typical activities within a 2 minute walk would include.

- NEAPs (Neighbourhood Equipped Areas of Play)
- LEAPS (Local Equipped Ares of Play)
- LAPs (Local Areas of Play)
- Outdoor Trim Trial Potential exercise stations
- Circular path around park for walking and running
- Potential Kickabout area
- Potential allotment/community garden area
- Cyclepath

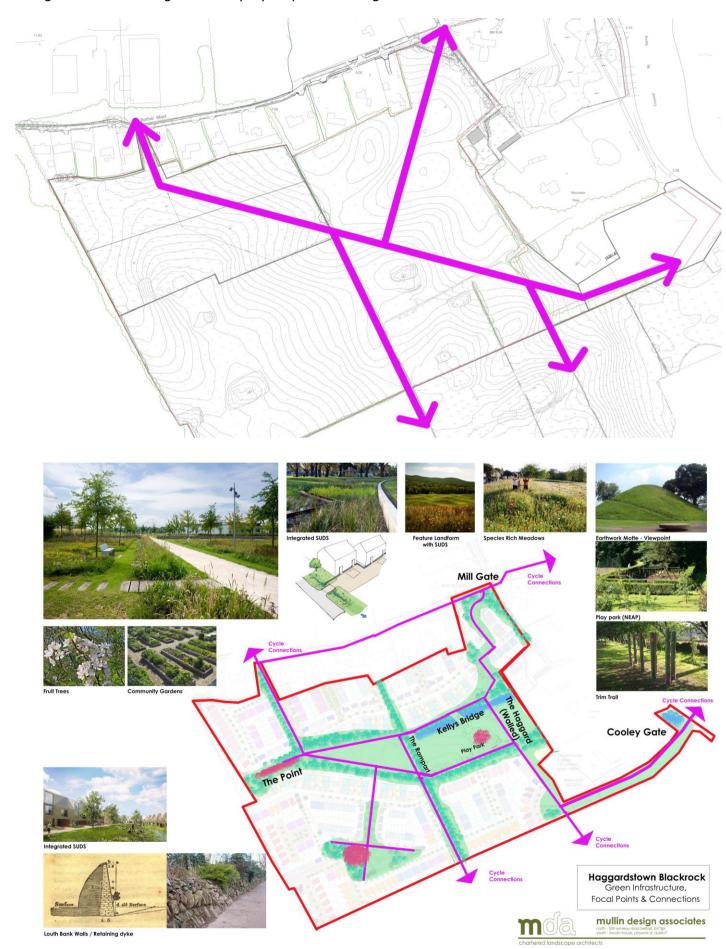








Haggardstown, Blackrock - Landscape Strategy / Design Code,



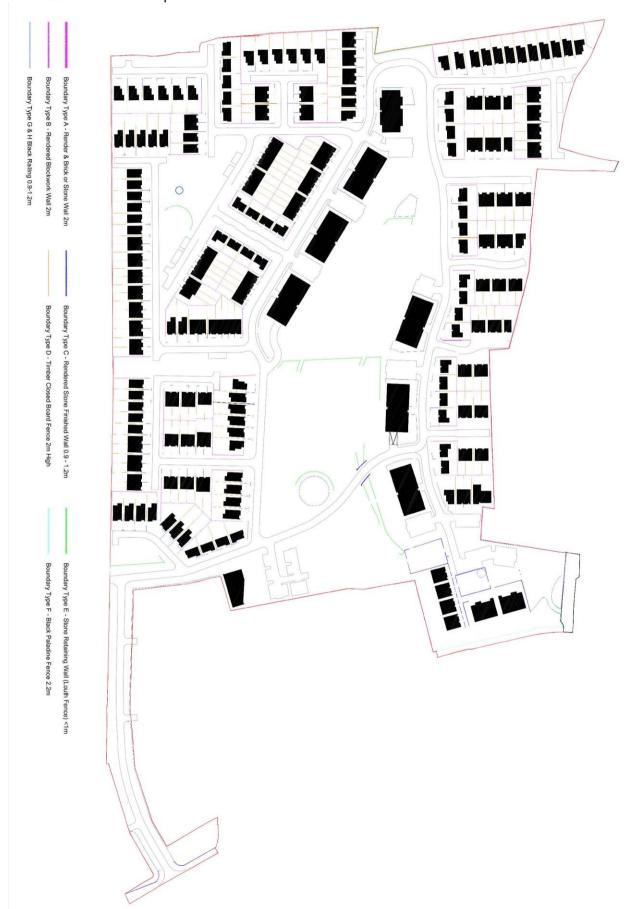
## 9 General Arrangement

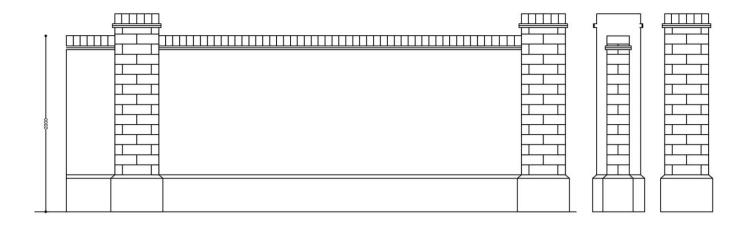


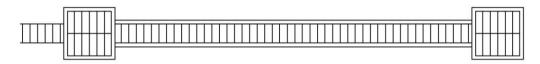
Haggardstown, Blackrock - Landscape Strategy / Design Code,

## 10 Boundary Details

A variety of boundary details have been developed and specified to reinforce the quality and character of the development.



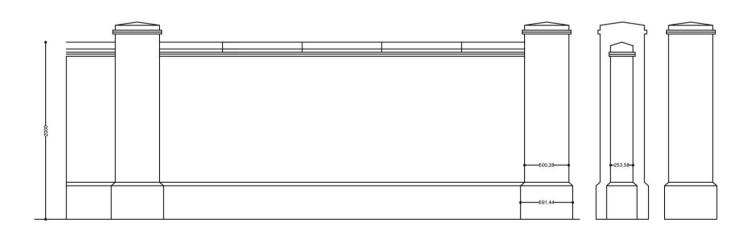


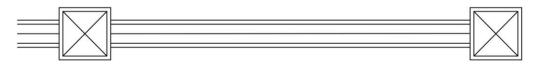


### **BOUNDARY TYPE A**

between privacy screen walls - (Rear gardens) Brick or Stone finished pillar in visually prominent locations

2m high blockwork wall with selected render finish to complement adjacent housing. Capping to be selected brick or stone finish. Brick or Stone pillars to be 450mm wide at centres and foundations to be approved by project engineer.

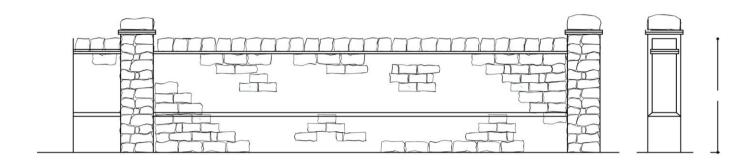


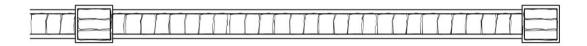


### **BOUNDARY TYPE B**

between privacy screen walls - (Rear gardens)

2m high blockwork wall with selected render finish to complement adjacent housing. Precast concrete copes and pillar caps. 450mm wide piers at centres to be approved by project engineer.

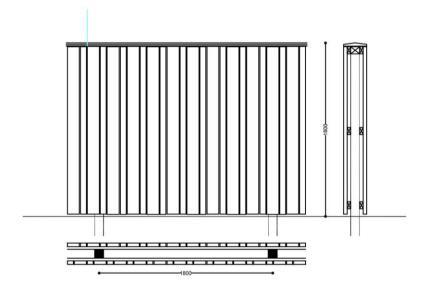




### **BOUNDARY TYPE C**

Between individual properties - (Front gardens) Bothar Maol & Mill End Character Areas

0.9 - 1.2m high blockwork wall with selected render & or stone finish to complement adjacent housing. Capping to be selected stone finish. Pier centres and foundations to be approved by project engineer.



### **BOUNDARY FENCE D**

### Between individual properties - (Rear gardens)

100 x 100mm timber or concrete posts at 1800mm centres into secure concrete foundation.

75x38mm horizontal timber bearers at top middle and bottom of post. 25mm thick alternative width vertical sheeting boards (with 25mm gaps) to both sides with joints staggered. Tapered timber capped piece to top of sheeting with 15mm shadow gap.

All timbers to be stained black throughout with suitable exterior grade stain. Overall height 1800mm above finished ground level. fence to follow contours of adjacent ground.



### **BOUNDARY TYPE F**

Site Boundary (Golf Course) / Pump House
Black Paladine fencing 2m high x 3m wide panels with posts 60 x60mm at an centres. This fence type offers a secure anti climb solution and is particularly successful when associated with hedgerow planting as it does not dominate visually and integrates with planting.

It is proposed to use this type of fencing along the sites external boundary, (notably the golf course) Would not be used where rear gardens back

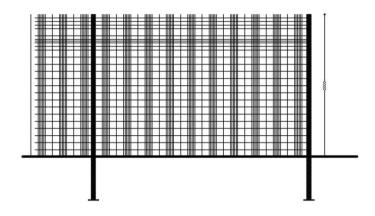
directly onto the boundary of other properties such as Bothar Maol in which case Boundary Type A or B would be considered appropriate.

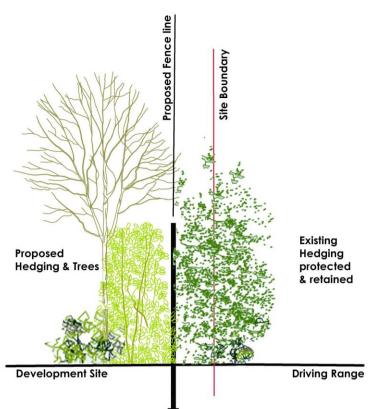






## **Golf Course Driving Range Boundary**





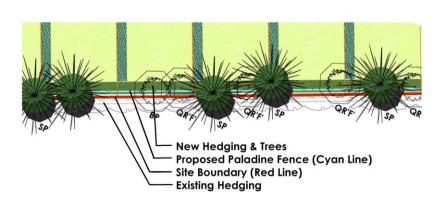
### **BOUNDARY TYPE F**

### Site Boundary (Golf Course) / Pump House

Black Paladine fencing 2m high x 3m wide panels with posts 60 x60mm at 3m centres. This fence type offers a secure anti climb solution and is particularly successful when associated with hedgerow planting as it does not dominate visually and integrates with planting. It is proposed to use this type of fencing along the sites external boundary,

(notably the golf course) Would not be used where rear gardens back directly onto the boundary of other properties such as Bothar Maol in which case Boundary Type A or B would be considered appropriate.

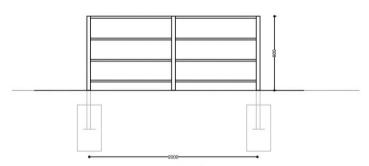












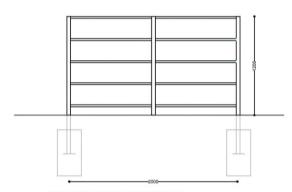
### **BOUNDARY FENCE G**

### Between individual properties - (Front gardens)

Metal Estate Railing Panel is 2m wide overall x 1.2m high above finished ground level. End posts / uprights 50 x25mm RHS (end posts are drilled with 3 holes for bolting to the next panel

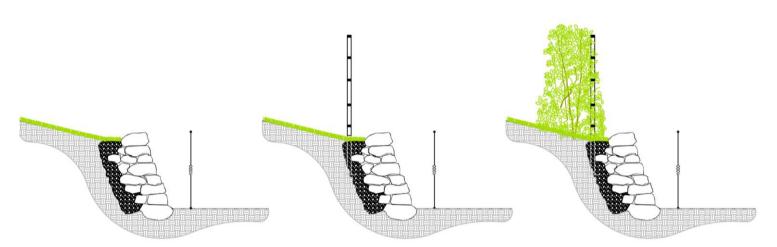






### **BOUNDARY FENCE H**

Along New Access Road (in Conjunction with Type E)
Metal Estate Railing Panel is 2m wide overall x 1.2m high above finished ground level. End posts / uprights 50 x25mm RHS (end posts are drilled with 3 holes for bolting to the next panel





### **BOUNDARY TYPE E - Louth Fence**

Between minor level changes- (<1m)
Public Areas - Access Road, Open Space
Traditional dry stone retaining wall configuration associated with this region

to be selectively introduced where there are low level changes (i.e less than 1m difference. Suitable for retaining informal stable slopes of less than 15%. Stone to be locally sources. Min width at top 300mm, Base stone on compacted subgrade. Front to be battered 250mm per 1000mm. Where walls are over 600mm height, variations should could include fence/railing with or without hedgerow.

## **APPENDIX 1 – Tree Survey Report**

### TREE SURVEY AND REPORT

**FOR** 

### LANDS AT BLACKROCK, LOUTH

APRIL & NOVEMBER 2018

**COMMISSIONED BY** 

### KINGSBRIDGE CONSULTANCY LIMITED

Dr Philip Blackstock

PB

### TREE SURVEY AND REPORT

On trees growing in the grounds of

Lands at Blackrock, Louth

For

### Kingsbridge Consultancy Ltd

### Terms of reference

This report was commissioned to record information on trees growing on or immediately adjacent to the above site (as defined in BS5837:2012). Obvious defects in these trees were noted, as were features that may create an impediment to a statutory provision or cause a nuisance. Recommendations for tree works that will eliminate, as far as is possible, the risk from dead or dangerous trees, abate nuisance and address the legal requirements of statutory providers have been included.

### Methodology

Trees growing on the above site were subject to a visual inspection carried out from the ground. The base of each trunk was 'sounded' to identify significant basal decay and evidence of recent alterations to site conditions was noted. No other methods for establishing the condition of these trees were used.

Site surveyed on

11th April & 2nd November 2018

(It is recommended that the trees reported on here are re-surveyed within five years of this report, or where significant deterioration has become evident, whichever is sooner)

Survey carried out and report compiled by

Dr Philip Blackstock, 26 Tullynahinnion Road, Portglenone BT44 8EL Telephone 02825 821202, Fax 02825 821295, Mobile 07767 393075,

Email: trees@philipblackstock.com



View of trees growing on the above site, taken from an adjacent public road

## REPORT ON TREES GROWING AT LANDS AT BLACKROCK, LOUTH APRIL 2018

- 1. Location & visual impact of the trees. Blackrock is an attractive seaside town close to Dundalk in Co Louth. It was formally a coastal settlement but is now expanding back from the sea into agricultural lands. The site reported on here consists of a number of these fields. Formally surrounding Mountainview House. This Gentleman's property is surrounded by belts of mature trees, some of which extend into this site. This group of trees provides shelter and helps to screen the site from the Blackrock road and they should be considered significant in the local landscape. The remaining trees reported on here are much younger or are growing on adjoining lands.
- 2. Historical development of the site. Some of the mature trees growing along the boundary of Mountainview house are noted in the first edition Ordnance Survey maps and are now about two hundred years old. These trees have been augmented by additional planting within the last one hundred years or so. Many of the old thorn hedges are also at least two hundred years old. The remaining trees are much younger and have grown from naturally dispersed seeds or have been planted in adjoining gardens within the last forty years or so.
- **3. Tree condition & recommendations**. Because of their age, some of the older trees growing on this site are now in a poor condition and these should be pruned or felled as detailed in the attached tree survey report sheets. It is understood that plans are being considered for the development of the above site. To ensure that trees to be retained are not damaged during construction, the Arboricultural method statements (that are included in this report) relevant to this project should be adopted.

All other recommendations are as per attached tree survey report sheets.

Dr Philip Blackstock

### ARBORICULTURAL METHOD STATEMENTS

**Protection of trees**. A protective barrier, 2.3m high and comprising a vertical and horizontal framework of scaffolding, well braced to resist impacts and securely supporting weldmesh panels, (as illustrated in Figs 2 & 3 of BS5837:2012) shall be erected around the base of all trees to be retained on site. This barrier shall be clearly identified on site by the attachment of all-weather signs of suitable dimension stating: 'CONSTRUCTION EXCLUSION ZONE – NO ACCESS'. The line of this fence shall be at least the distance defined in the attached plan, or as otherwise directed by Dr Philip Blackstock. No construction traffic, materials or debris will be permitted within this zone of protection.

Access facilitation pruning. If it is deemed appropriate to trim back retained trees to provide adequate access to approved construction works, all such tree works should be undertaken by a competent and suitably qualified tree surgeon (will associated support, as defined in the Health and safety section of this report). Such works shall remedy any tree related conflict with proposed structures or access in a way that ensure that not less than 70% of live buds are retained within the tree canopy. The aim of the tree works shall be to retain the general form of the tree by a combination of crown thinning, reduction of end weight (tipping back of outermost branches) and the re-forming of the trees crown to create a pleasing and balanced crown. No branch, limb or trunk greater than 100mm diameter shall be cut in the process of reducing end weight.

**Temporary surfaces within zone of protection**. Where temporary access is to be established within the 'zone of protection' surrounding retained trees, (for example, during demolition of existing buildings), ground surfaces will be protected by a layer of sharp sand, approx. 50 mm thick, overlaid with a geotextile membrane on which a temporary surface of no fines granular material, at least 150 mm thick, (as detailed by a competent Civil or Structural Engineer) is laid. Where traffic is turning on these surface, stout planks will be laid over the geotextile membrane and below the granular material. The trunks of adjacent trees shall be suitably protected as indicated on site by Dr Philip Blackstock.

**Demolition within the zone of protection**. If it is deemed necessary to carry out demolition works within a construction exclusion zone surrounding retained trees, (for example, to remove existing paths), or kerbs, only pedestrian operated plant, or low ground pressure plant that is less than 2 tonnes gross weight fully loaded, shall be permitted. Such plant shall only be operated on existing hard surfaces, or where temporary surfaces have been established. In any case, no excavations within the root protection zone of these retained trees shall be permitted, except only, under close supervision, with the use of an 'Air Spade' or by the careful use of hand tools in a way that retains, without damage, all exposed roots with a diameter greater than 25mm.

**Scaffolding within zone of protection**. Where scaffolding is to be established within the 'zone of protection' surrounding retained trees, the existing undisturbed ground surfaces shall be protected by a layer of sharp sand, approx. 50 mm thick, overlaid with a geotextile membrane. Stout planks, such as closely side-butted scaffold boards, will be laid over the geotextile membrane and scaffolding will be constructed on these planks with additional stays, as directed by a competent person. Adequate protective fencing, as Illustrated in Figs 2 & 3 of BS5837:2012, will be maintained between scaffolding and adjacent trees.

**Construction of hard surfaces close to retained trees**. Where permanent surfaces are to be constructed close to retained trees, within the zone of protection as defined by BS5837: 2012, carefully remove accumulated organic material and loose soil, leaving existing topsoil in situ. Protect root zone with a layer of sharp sand and, on this, establish a firm sub-base of no-fines granular material supported on a geotextile membrane <u>and</u> a three-dimensional cell product (as defined by a competent Civil or Structural Engineer). Construct the paved area on this sub-base using established design guidelines (and no-fines granular material) with a porous surface finish such as pavers or porous bitmac.

Alterations of levels on lands adjoining construction exclusion zones. Where it is deemed appropriate to lower ground levels on land adjoining a root protection zone established around a retained tree, all excavations and the subsequent construction of supporting structures shall be managed in a way that excludes access by construction traffic to the construction exclusion zone. Where such alterations result in the lowering of existing surfaces, the existing ground water environment within the root protection zone shall be maintained by the insertion of a root barrier behind proposed supporting structures. This shall consist of a non-porous barrier carefully inserted in a way that maintains the existing soil moisture regime surrounding the retained tree. Where alterations result in the raising of levels, these shall be designed and detailed by a competent Civil or Structural Engineer to ensure no alterations to ground conditions within the root protection zones.

**Landscaping within the root protection zone**. If it is deemed necessary to carry out landscaping, planting or reinstatement works within a construction exclusion zone surrounding retained trees, only pedestrian operated plant, or

low ground pressure plant that is less than 2 tonnes gross weight fully loaded, shall be permitted. Such works should be supervised by competent Horticulturalists and be timed and designed to ensure that no soil compaction occurs. In any case, no excavations within the root protection zone of these retained trees shall be permitted, except only, under close supervision, with the use of an 'Air Spade' or by the careful use of hand tools in a way that retains, without damage, all exposed roots with a diameter greater than 25mm.

### **HEALTH AND SAFETY**

Working with trees is a hazardous occupation. It is important that competent tree surgery contractors are employed to carry out the tree works recommended in the attached tree survey report sheets. These contractors should carry all relevant insurance cover and should comply with the recommendations outlined below.

Notwithstanding the following recommendations, all tree surgeons and accompanying staff should comply with all the requirements contained in the Safety, Health and Welfare at Work Act 1989 (SHWW Act, 1989) and the Safety, Health and Welfare at Work (General Applications) Regulations, 1993 (GAR Regs, 1993) for forestry operations, the Code of Practice for Managing Safety and Health in Forestry Operations and all subsequent legislation made thereunder.

### Staff qualifications, experience and training

Only skilled operatives should be employed for all the work specified in the attached tree survey report sheets. These skilled operatives should have a proven expertise and experience in the areas of work specified and should hold all relevant certificates of competence.

Operatives using chain saws to fell trees must have National Proficiency Test Council (NPTC) certificate of competence Units CS 30, 31\*, 32\*, 33\* (\* whichever is appropriate for the size of tree being felled) if they are working from the ground and, in addition, Units CS 38, 39, 40 & 41 if they are climbing.

All operatives undertaking work near underground or overhead electric cables must have attended an Electricity Safety Awareness course. They must comply with the guidelines laid down in FASTCo Safety Guide 804: Electricity at work; Forestry and Arboriculture. Where there is a risk of a climber, equipment or parts of a tree touching or coming close to overhead cables, the advice of ESB must be sought, and adhered to, before work commences.

### Work wear

All operatives should wear the appropriate safety clothing for the task being performed as specified in the relevant safety codes. Where operatives are employed on tree work near public roads, or when the available lighting is poor, they should wear high visibility 'florescent' jackets or waistcoats

### **Tools and Equipment**

Tree surgeons should use such tools and equipment deemed suitable to complete the specified task. All bladed tools should be sharp and in a serviceable condition. All plant and machinery operated by the tree surgeon should be tested and certified to comply with all current legislation. All vehicles should be taxed and roadworthy. Machinery and vehicles should carry operational fire extinguishing equipment to the standards required by insurers.

All machinery should be used in accordance with the manufacturers' instructions. These machines should carry warning notices as specified by the relevant Health and safety guide.

Climbing equipment for tree work is subject to the Provision and Use of Work equipment regulations (NI) 1998 (PUWER), the Lifting Operations and Lifting Equipment Regulations (NI) 1998 (LOLER) and is also subject to the Personal Protective Equipment at Work regulations (NI) 1992 (PPE Regs). Operatives using climbing equipment should be familiar with, and comply with, these and all other relevant regulations.

### First aid

All chain saw operatives should have a current First Aid Certificate. No chain saw operative should be left working on site without an additional first aider present. These operatives should be familiar with FASTCo Safety Guide 802: Emergency Planning and First Aid.

All operatives should have immediate access to a first aid kit conforming to SI 1981 No 917 and FSC 34, and, in addition, carry a personal first aid kit which includes a large sterile wound dressing.

### **Site Organization**

Tree surgeons should ensure that a team of at least three people carry out all tree climbing, pruning and tree felling operations. When undertaking tree climbing work, one of the grounds staff must be competent to perform aerial rescue and be conversant with FASTCo Safety Guide 401: Aerial Tree Rescue. In addition, one of the ground staff must be made responsible for ensuring that there is no trespass into the working zone when tree pruning or felling operations are taking place. Adequate staff should be available during tree work operations to ensure that no unauthorized persons or livestock enter the working area.

Tree surgeons should provide and constantly maintain all necessary warning and direction notices, cones and barriers when carrying out tree works that are adjacent to a road or footpath used by the public. These should conform to the recommendations and directions given in;

- Chapter 8 of the Traffic Signs Manual 1993, published by DRD
- Section 174 of the NI orders of the Highways Act
- Section 65 & 142 of the New Roads and Street Works Act
- Safety at Street Works and Road Works code of practice 1993
- Any other relevant legislation

Where tree works are to be carried out over, or adjacent to, public roads, the contractor should arrange the work to avoid traffic congestion and public inconvenience. They should make arrangements with the Garda Siochana and the local county council as may be found necessary.

### **KEY TO SURVEY SHEETS**

TITLE	DESCRIPTION
Tree No	The identification number of the tree, as indicated on site by a metal
	identification tag attached to the tree and defined with the prefixes;
	'T' (tree), 'G' (group of trees) and 'W' (area of wood)
Species	The common English name of the tree, as used by Alan Mitchell in 'A
	field Guide to the trees of Britain and Northern Europe' (Collins,
	London, 1974)
Age	The life-cycle age of the tree, described as $\mathbf{Y} = \text{young}$ (vigorous
	growth, non-flowering), <b>YM</b> = young-mature (vigorous growth, some
	flowering, maturing crown), <b>EM</b> = early mature (vigorous growth;
	mature crown), $\mathbf{M}$ = mature (slowing growth, full crown, flowering)
	and <b>OM</b> = over-mature (Little growth, heavy flowering, thinning
	crown or dieback)
Condition	The condition of the tree, as assessed by a visual inspection on site
	and described as <b>Good</b> (near perfect form and condition), <b>Fair</b>
	(normal form, sometimes requiring remedial works), <b>Poor</b> (significant
	weakness or rot, requiring substantial remedial works or felling) and
11.2.1.1	Dead (dead standing tree or stump)
Height	The height of the tree, given in metres
Crown spread	The radial crown spread of the tree for each of the four cardinal points, given in metres
DBH	The diameter of the tree trunk, measured at approximately 1.3
	metres above ground level and given in centimetres
Lower crown	The existing height of the main tree canopy above ground level, given
	in metres
Observations	A general description of the tree as seen on site, including
	distinguishing features and evidence to support the recommendations
	given for appropriate tree works
Recommendations	An outline tree management plan identifying the level and type of
	tree works that would be appropriate to ensure that the site remains
	safe and that the tree develops in a safe and satisfactory manner
Category	The category that the individual tree belongs, based mainly on
	arboricultural qualities and following Table 1 of BS5837:2012. Given
	as <b>A</b> (good examples) <b>B</b> (reasonable example, often with minor flaws)
	C (low quality trees, often with impaired condition) and U (not
	suitable for retention)

### **ARBORICULTURAL TERMS**

The following interpretation of the terms used in the attached tree survey report sheets should be adopted when fulfilling their recommendations.

#### Crown clean

The removal of broken, diseased, dying or dead branches or snags that are either over 50 mm in diameter or are more than 200 mm in length.

### Remove ivy

The cutting of ivy stems at their point of entry into the soil, taking care not to damage the tree. All branches, stalks and creepers of both alive and dead ivy should be removed from the crown of the tree.

### **Trim or remove branch stumps**

The cutting of all branch stumps or snags back to just outside the branch collar and branch bark ridge.

### Remove swing / tree hut / sign etc.

The removal of structures within the crown or attached to the tree, including nails or other fastenings.

### Trim / tidy / remove epicormics

The removal of all soft growth or epicormics growing from the trunk of the tree, up to a height of 2.4 m.

### Crown lift to above eye level / over footpath.

The removal of all soft growth, including epicormics and all lateral branches, up to a height of 2.4 m above ground level. When lifting the crown, upright laterals may be retained.

### Crown lift over carriage / driveway etc

The removal of all lateral branches and soft growth that are overhanging, or within 1.0 m of, a road or lane, up to a height of 5.1 m.

### Trim back from building

The removal of all lateral branches and soft growth growing within 2.0 m from the wall and from within at least 3.0 m from a window and above the roof of a building.

### Clear overhead cables

The removal of all branch growth from within, or likely to come within, 1.0 m from overhead telephone cables.

Where overhead electric cables are encountered, the tree surgeon must liaise with engineers from Northern Ireland Electricity and must conform to their recommendations and advice. All staff undertaking work near underground or overhead electric cables should have attended a Northern Ireland Electricity Safety Awareness course and must comply with the guidelines laid down in AFAG Safety Guide 804: Electricity at work; Forestry and Arboriculture.

### Reduce / remove competing leaders

The trimming back or removal of all but one dominant, upright stem in a way that creates an apical crown angle of less than 90°. Competing stems should be trimmed well back to a side branch showing strong horizontal growth patterns or should be removed to just above the branch collar and branch bark ridge.

### Reduce end weight

The reduction of the crown of a tree by trimming back the branch tips by the described amount. Branch tips should be trimmed back to a suitable lateral twig or branch (in strict accordance with the recommendations contained in BS3998:2010, Tree Work, in a way that maintains the general crown characteristics of the tree and its species. <u>In all cases, no branch, limb or trunk greater than 100mm diameter shall be cut in the process of reducing end weight.</u>

### **Re-form Crown**

The carrying out of such trimming and branch removal as is necessary to create (or recreate) a tree crown architecture capable of supporting additional tree growth and that complies with the normal crown form for that species. In all cases, no branch, limb or trunk greater than 100mm diameter shall be cut in the process of reducing end weight.

### **Topping, Re-Pollarding, Re-Coppicing**

The removal of all growth back to the required height. In most circumstances, it will not be possible to trim back to a suitable lateral branch and, because of this; cuts should be cleanly executed and should produce a sloping surface that will not collect water.

### **Prune as per Belfast Street Tree**

The complete pruning of a tree, which is a combination of crown reduction, crown lifting and crown thinning in a way that preserves the characteristics of the tree and its species. All growth removed during pruning must be taken back to an appropriately sized lateral branch, twin or bud to leave an acceptable crown form. **In all cases, no branch, limb or trunk greater than 100mm diameter shall be cut in the process of reducing end weight.** 

### **Retrenchment Pruning**

The phased reduction of the crown of veteran and old pollarded trees, removing or reducing end weight in the upper crown and spreading branches to emulate the natural decline of tree crowns with age. In most circumstances, it will not be possible to trim back to a suitable lateral branch and, because of this; cuts should be cleanly executed and should produce a sloping surface that will not collect water.

### Fell

The complete felling of a tree in a safe manner, leaving a smoothly surfaced stump that is cut as close to ground level as is possible

### Any other terms used

If he is any doubt, the tree surgeon should contact Dr Philip Blackstock on 02825 821202 or 07767 393075 for clarification of these or any other terms used in the attached tree survey report sheets.

### Statement of truth

I Dr Philip Blackstock confirm that I have made clear which facts and matters referred to in this report are within my own knowledge and which are not. Those that are within my own knowledge I confirm to be true. The opinions I have expressed represent my true and complete professional opinions on the matters to which they refer.

Signed:

Date:

5<sup>th</sup> November 2018

### **QUALIFICATIONS**

National Diploma of Horticulture (R.H.S) Inter.

1/3/M

Diploma in Industrial Management

M.Sc. in Environmental Management (A Field Survey of Unmanaged Roadside Cuttings in South Antrim)

D.Phil. in Forestry (Broad-Leaved Tree and Shrub Invasion of Conifer Plantations in Ireland)

Professional member of the Arboricultural Association Registered Forestry Consultant with the Irish Forest Service

### **EMPLOYMENT**

1996 to present

Arboricultural and Woodland Consultant

Duties include carrying out tree and vegetation surveys and providing tree and woodland management plans, completing reports and liaising with clients, providing court appearances etc. for public and private clients.

### ARBORICULTURAL AND FORESTRY EXPERIENCE AND EXPERTISE

I have carried out surveys and produced reports on the health, condition, amenity value and landscape value of more than 250,000 trees since 1983. Since 1996 I have been fully employed as an Arboricultural and Forestry Consultant. Clients have now included most of the Local Authorities, Health Trusts and Government Departments within Northern Ireland. Private clients have included Solicitors, Architects and Developers. I have also lectured, to foundation degree level, on arboriculture and forestry.

I have provided expert opinion (including Court appearances) for many clients involved in litigation or in planning appeals since 1996. Topics covered by these opinions have included the predictability of failure in trees, amenity and financial evaluation of damage to trees, evidence of subsidence caused by trees, evidence of unsafe tree surgery practices leading to injury, and tree related evidence in boundary and planning disputes.

I have maintained a research interest in the effects of environmental influences on tree and shrub regeneration in Ireland and on the development of woody biodiversity in recently planted woods. I have also a research interest in the distribution of and environmental influences on deciduous tree diseases, tree stability and in the incidence of dangerous roadside trees.

### **Dr Philip Blackstock**



	200		2000	Control of the Control	Ü	s uwo	Crown spread		Lower	201000000000000000000000000000000000000	X2000 A2000	200000 - 100	
Tree No	Species	Age	Condition	Height	z	ш	s	3	Crow	рвн	Observations	Recommendations	Category
<del>-</del>	Hedge	Σ	Poor	2		2			0	20	This hedge contains Leyland cypress that was closely clipped and have extensive dieback	No recommendation given	5
2	Hedge	Σ	Fair	က		_			0	10	This hedge has been part clipped	No recommendation given	B1
3	Row of Hybrid Poplar	Σ	Poor	19		9			8	55	This row contains about twelve trees that are mainly multi stemmed from 3.0m with dieback and rot	Crown clean, remove ivy, reduce end weight by 4.0m and remove rotten stem	5
4	әбрәң	λM	Good	9		3			0	15	This hedge contains Leyland cypress set 5.0m from boundary lane	No recommendation given	A1
5	Ash	EM	Fair	15	7	5	5	9	4	37	This tree has multiple stems and a fair crown	Crown clean and remove ivy	B1
9	Row of Trees	Σ	Fair	16		5			4	50	This row contains scots pine with poplar and Lawson cypress set less than 1.0m from boundary fence	Crown lift over site	P3
2	Elder	MO	Fair	9	Ŋ	ю	4	2	-	33	This tree has multiple stems, has part collapsed and is resprouting	Crown clean, remove ivy and stabilise crown	B1
8	Group of Pine	Σ	Fair	17		5			9	09	This group contains a small wood adjoining lands set more than 3.0 from boundary	No recommendation given	B1
6	Hedge	λM	Good	9		2			0	10	This hedge contains hawthorn that is dense and faced But not topped	No action is required	A1
10	Hedge	МО	Poor	5		2			0	20	This hedge contains hawthorn and blackthorn that are gappy and in poor form	Maintain as hedge	Cd
1	Ash	Σ	Poor	12	5	2	9	2	е	47	This tree has multiple stems and is coppiced with basal rot and weak growth	Fell	n

	700		2000	2000000	Ü	S UMO	Crown spread	Lower		2000	Section 1984	01.000
Tree No	Species	Age	Condition	Height	z	Ш	s	W Crow	w DBH	Observations	Recommendations	Category
12	Hedge	Σ	Poor	2		1		0	15	This hedge contains hawthorn that is closely clipped and very gappy	No action is required	C1
13	Group of Beech	<b>&gt;</b>	Fair	5		~		-	10	This group contains a recently planted shelter belt in fair form	Remove competing leaders	B1
14	Group of Beech and Oak	>	Fair	7		2	-	₹"	15	This group contains a double row of oak with beech that are in fair form	Clear back from overhead cables and remove competing leaders	B1
15	Goat Willow	ΑM	Fair	5	8	4	ю	2 0	1	This tree has multiple stems and a fair crown	No action is required	B1
16	Row of Lawson Cypress	Σ	Poor	10		က		_	35	This row contains trees that are mainly multi stemmed from 1.0m on adjoining lands	No recommendation given	C1
17	Hawthorn	Σ	Fair	7	4	3	2	3 2	43	This tree has multiple stems from 1.0m and a good crown	No recommendation given	B1
18	Osier	Σ	Fair	6	9	4	2	0 2	27	This tree has multiple stems and a spreading crown	Crown clean	B1
19	Two Hawthorn	Σ	Fair	9		4			25	These are two roadside trees with spreading crowns	Crown clean and remove ivy	B1
20	Ash	ΑM	Fair	11	3	4	4	4 2	30	This tree has two stems from 1.0m and a good crown	No action is required	B1
21	Group of Alder	W	Fair	6	in the state of th	4		0	25	This group contains a small thicket of mature trees surrounded by mainly multi stemmed seedlings with small ash privet	Crown clean and remove ivy	B1
22	Hedge	МО	Poor	4	1	က	i	0	20	This hedge contains hawthorn and elder that are gappy and covered with ivy	No recommendation given	C1
23	Sycamore	ΑM	Fair	8	3	5	4	4 2	27	This tree has multiple stems from 1.0m and a good crown	No recommendation given	B1
24	Area of Trees	Σ	Fair	19		80		-	45	This area contains a row of ash and sycamore that are suppressed by overhanging black pine	Crown clean, remove ivy and reduce trespassing branches by up to 4.0m	B1

		5	2000	Segues School	S	OWN	Crown spread	velice	Lower				9200
Tree No	Species	Age	Condition	Height	z	Ш	s	3	Crow	рвн	Observations	Recommendations	Category
25	Sycamore	ΑM	Fair	6	4	က	က	е	2	26	This tree has multiple stems and a fair crown	No recommendation given	B1
26	Hedge	Σ	Fair	9		က			0	20	This hedge contains hawthorn and alder that are gappy	No recommendation given	18
27	Ash	M	Fair	15	9	9	7	9	3	55	This tree has multiple stems and a spreading crown	Crown clean, remove ivy and reduce end weight by 2.0m	B1
28	Ash	MA	Fair	13	5	9	8	9	3	31	This tree has multiple stems and a spreading crown	Reduce end weight by 2.0m over site	B1
29	Sycamore	M	Fair	21	7	8	4	9	2	96	This tree has a single stem to 5.0m and a dense, one sided crown	Crown clean and remove ivy	B1
30	Sycamore	M	Fair	21	ь	6	7	က	7	63	This tree has two stems and a heavy one sided crown	Crown clean, remove ivy and reduce end weight of side branches by 2.0m	18
31	Sycamore	Σ	Fair	21	9	4	7	5	7	63	This tree has a single main stem to 8.0m and a fair crown	Crown clean and remove ivy	19
32	Ash	Σ	Fair	22	7	7	4	7	5	73	This tree has a single stem to 5.0m and a thinning crown	Crown clean, remove ivy, reduce end weight by 2.0m and inspect for rot	B1
33	Group of Elm	٨	Fair	7	,	4			-	15	This group contains scattered suckers with spreading crowns	Crown clean, remove ivy and monitor for death	18
34	Elm	MA	Fair	6	9	5	9	6	3	22	This tree has multiple stems and a spreading crown	Crown clean, remove ivy and monitor	B1
35	Hedge	Σ	Fair	7		2			0	10	This hedge contains hawthorn that are dense and overgrown	No action is required	18
36	Group of Leyland Cypress	M	Fair	14		2			4	50	This group contains a dense clump of trees that are multi stemmed from 2.0m on adjoining lands	No recommendation given	B1
37	Ash	Σ	Poor	19	T	9	2	က	2	62	This tree has two stems from 4.0m and is hollow with a damaged crown	Fell	D

		55			O	rown	Crown spread	Verbook	Lower				
l ree No	Species	Age	Condition	Height	z	ш	S	3	Crow	DBH	Observations	Recommendations	Category
38	Ash	Σ	Fair	23	80	7	5	9	ω	82	This tree has a single leaning stem to 8.0m and a damaged crown	Crown clean, remove ivy and reduce end weight by 2.0m	B1
39	Sycamore	Σ	Fair	22	œ	5	6	5	9	97	This tree has two stems from 3.0m and a massive spreading crown	Crown clean, remove ivy and reduce end weight of side branches by 2.0m	B1
40	Sycamore	EM	Fair	14	9	2	5	က	<del>\</del> \( \frac{1}{2} \)	33	This tree has two stems and a suppressed, spreading crown	Crown clean and remove ivy	18
41	Sycamore	МО	Poor	16	9	9	5	2	4	103	This tree has multiple stems from 1.0m and is hollow with a thinning crown	Fell	n
42	Ash	EM	Poor	12	4	2	2	5	2	42	This tree has a single leaning stem to 4.0m with a large wound at 4.0m	Crown clean, remove ivy and inspect for rot	C1
43	Sycamore	M	Fair	19	7	9	9	2	•	61	This tree has a single main stem and a fair crown	Crown clean and remove ivy	B1
44	Beech	M	Fair	22	7	5	7	9	4	78	This tree has a single main stem and a dense crown	Crown clean and remove ivy	B1
45	Sycamore	Σ	Fair	13	9	4	0	က	7	42	This tree has a single leaning stem and a one sided crown	Remove ivy	<b>18</b>
46	Sycamore	λM	Poor	9	9	3	0	2	2	25	This tree has fallen and removed	Size .	n
47	Beech	M	Fair	22	3	9	6	7	7	82	This tree has a single stem to 8.0m and a dense crown	Crown clean and remove ivy	B1
48	Beech	ð	Dead		Ü	31	71	21		27	This tree is dead	Fell	n
49	Sycamore	Μ	Fair	21	8	8	5	9	9	103	This tree has two stems from 2.0m and a heavy one sided crown	Crown clean, remove ivy and reduce end weight by 2.0m over adjoining garden	B1
20	Beech	M	Fair	22	7	3	8	8	8	108	This tree has a single stem and a good crown	Crown clean and remove ivy	B1
51	Ash Stumps	r	Dead	i	ï	£	r	2	Ŷ	56	This tree is dead	Fell	n

200		5		W2007 20000	O	OWn	Crown spread	vene	Lower	100000000000000000000000000000000000000	77		000000
Tree No	Species	Age	Condition	Height	z	E	s	8	Crow	рвн	Observations	Recommendations	Category
52	Sycamore	M	Poor	13	7	5	N	2	2	36	This tree has a single leaning stem and a one sided crown, It has a part failed crown	Fell	D
53	Sycamore	M	Poor	14	2	3	2	8	3	38	This tree has a single stem and a damaged crown	Crown clean, remove ivy and tidy crown	C1
54	Sycamore	V	Fair	15	0	4	7	4	4	47	This tree has a single stem to 6.0m and a one sided crown	Crown clean and remove ivy	19
55	Sycamore	Σ	Fair	18	2	2	9	9	9	52	This tree has two stems from 5.0m and a spreading crown	Crown clean and remove ivy	181
56	Sycamore	Σ	Fair	17	5	2	~	2	2	38	This tree has a single leaning stem and a one sided crown	Crown clean and remove ivy	18
57	Sycamore	M	Fair	17	3	4	8	2	5	46	This tree has a single stem and a neat crown with heavy epicormic growth	Crown clean and remove ivy	B1
58	Sycamore	EM	Fair	16	-	3	4	2	2	30	This tree has a single main stem with heavy side branches and damage at 5.0m	Crown clean, remove ivy and reduce end weight by 2.0m	B1
59	Sycamore	Σ	Fair	17	9	5	က	7	7	99	This tree has multiple stems from 2.0m and a one sided crown	Crown clean, remove ivy and clear back from overhead cables	B1
09	Beech	Σ	Fair	19	9	7	5	7	7	99	This tree has a single leaning stem to 5.0m and a fair crown	No recommendation given	18
61	Ash	M	Fair	18	2	3	7	9	6	58	This tree has two stems from 7.0m and a spreading crown	Crown clean, remove ivy and reduce end weight by 2.0m	181
62	Ash	M	Fair	17	-	ST.	5	9	5	29	This tree has two stems and a small crown	Crown clean and remove ivy	B1
63	Ash	<b>&gt;</b>	Fair	9	0	~	4	7	3	15	This tree has a single stem and a one sided crown	Remove ivy	B1
64	Ash	E	Fair	14	-	4	o	4	2	38	This tree has a single stem to 5.0m and a scrappy crown	Crown clean and remove ivy	B1

O Q Q Q Q Q Q Q Q Q Q Q Q Q Q Q Q Q Q Q		53			ū	Crown spread	prea	70	Lower		200		
65	Species	Age	Condition	Height	z	ш	s	3	Crow	DBH	Observations	Recommendations	Category
	Ash	EM	Poor	14	က	2	е	က	12	30	This tree has a single stem and a neat crown with damage and rot to 2.0m	Fell	>
89	Ash	EM	Fair	18	5	7	~	2	14	27	This tree has a single stem and a small crown	Remove ivy	18
69	Ash	M	Fair	18	2	0	4	9	12	35	This tree has a single leaning stem and a one sided crown	Crown clean and remove ivy	20
70	Ash	EM	Fair	18	۲	2	5	3	12	31	This tree has a single stem and a neat crown	Crown clean and remove ivy	B1
72	Ash	EM	Fair	16	4	0	5	3	8	27	This tree has a single stem to 8.0m and a small crown. I has recently been pruned	No action is required	B1
73	Ash	EM	Fair	16	5	0	4	9	12	35	This tree has a single stem to 5.0m and a small crown that has recently been pruned and has minor cankers	Reduce end weight by 2.0m	B1
74	Ash	M	Fair	17	9	5	9	7	8	61	This tree has two stems from 4.0m and a fair crown. It has recently been pruned	No action is required	B1
75	Sycamore	YM	Fair	12	2	~	2	4	8	26	This tree has a single stem and a fair crown. It has recently been pruned	No action is required	B1
77	Ash	M	Fair	16	2	5	4	5	10	46	This tree has a single stem and a good crown. It has recently been pruned	No action is required	B1
78	Ash	Σ	Fair	16	•	2	4	4	6	47	This tree has a single stem and a neat crown. It has recently been pruned	No action is required	B1
80	Row of Trees	>	Fair	4		_			~	10	This row contains recently planted ash, cherry and oak etc	No action is required	18

		8		20000	Cro	Wn St	Crown spread	Lower				
Tree No	Species	Age	Condition	Height	z		S	Crow	рвн	Observations	Recommendations	Category
						98				This hedge consists of		
81	Hedge	Σ	Good	<u> </u>		~		0	2	Escallonia that has been	No recommendation given	A1
										closely trimmed		
						7.				This hedge consists of		
82	Hedge	Σ	Fair	က		7		0	10	Escallonia that has been	No recommendation given	91
										closely trimmed		
	backer 1 to mod					8				This row contains trees that		
83	Cyprose	Σ	Fair	10		4		5	40	are mainly multi stemmed	No recommendation given	91
	cypiess									from 1.0m and not trimmed		
										This hedge is gappy,		
84	Hawthorn Hedge	Σ	Fair	9		4		7	20	undamaged and over	No recommendation given	B1
										shadowed by Leyland cypress	3	
						1				This row contains a mix of	1	
85	Row of Trees	Σ	Fair	6		4		2	25	apple, cherry and hornbeam	No recommendation given	<b>B</b> 1
										etc on adjoining lands		
										This hedge contains Leyland	1	
98	Hedge	Σ	Poor	2		7		0	20	cypress that are gappy and	No recommendation given	5
										were recently clipped		