

# DESIGN RATIONALE - LANDSCAPE ARCHITECTURE

Project: **COLP WEST, DROGHEDA, CO. MEATH**

Project no.: **Sh.10**

Prepared on behalf of: **SHANNON HOMES**

Prepared by: **DERMOT FOLEY LANDSCAPE ARCHITECTS**

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**ISSUED FOR:** INFORMATION/BILLING/PLANNING/TENDER/CONSTRUCTION

## 1 Introduction

The objective of this report is to describe the proposed landscape and external works as part of the proposed residential development at Colp West, Drogheda, Co. Meath. This report should be read in conjunction with documents issued and included in this submission by Dermot Foley Landscape Architects, Duignan Dooley Architects, John Spain Associates, DBFL Consulting Engineers, Charles McCorkell Arboricultural Consultancy and others.

Dermot Foley Landscape Architects visited the site on several occasions from September 2018 to July 2019 in order to observe conditions on site, such as existing vegetation, conditions under foot, boundaries and other items which would have a bearing on the design process.

Charles McCorkell Arboricultural Consultancy was commissioned to carry out a Tree Survey and Arboricultural Impact Assessment in compliance with BS 5837:2012. These documents are included separately as part of this submission.

The following additional documents have been issued by Dermot Foley Landscape Architects as part of this submission:

<b>No.</b>	<b>Scale</b>	<b>Size</b>	<b>Title</b>
201	1:500	A0	<i>Landscape Plan 1</i>
202	1:1000	A0	<i>Boundary Plan</i>
203	1:500	A0	<i>Landscape Plan 2</i>
210	1:200	A2	<i>Detail Landscape Plan 1</i>
211	1:200	A2	<i>Detail Landscape Plan 2</i>
212	1:200	A2	<i>Detail Landscape Plan 3</i>
240	1:100	A1	<i>Landscape Sections</i>
250	1:20	A1	<i>Typical Hard Landscape Details</i>
260	1:20	A1	<i>Typical Soft Landscape Details</i>

## 2 Landscape Appraisal

### 2.1 General

The lands owned by the client are situated east of Drogheda town. Bound by Colpe Road to the south, Mill Road to the east, the Dublin – Belfast railway line to the west and agricultural lands to the north, they occupy approximately 30 hectares in total.

The subject site is irregular in shape with a main site area. Ground conditions vary, with the lands mostly free draining. The site borders the railway line to the west, agricultural lands to the south, the Gaelscoil an Bhradain Feasa to the east and extensive orchards to the north. It constitutes c. 9 hectares. The lands currently comprise arable land and grassland and are divided by a line of hedgerow in the centre.



*Panoramic view looking north-west from the existing hedgerow in the center of the site.*



*Panoramic view looking north from the southern site boundary.*

## 2.2 Boundaries

The site boundaries vary in character. The northern boundary comprises a dense hedgerow, made up of mostly hawthorn. It extends along the entire northern boundary and extends south-west where a number of mature trees overhang the site along the boundary. Further south-west a group of early mature trees form a buffer between the site and the existing railway line. The southern site boundary is generally open, looking onto undeveloped agricultural lands. An area of open space separates the site from the primary school further east.



*View from the center of the site looking towards the northern site boundary.*



*View from the western site boundary looking north towards the hedgerow and group of mature trees in the corner.*



*View from the western site boundary looking south towards agricultural lands.*

### 2.3 Existing Trees

All of the existing trees are located along the boundaries and within the hedgerow running through the center of the site. Most of the trees on site are Ash. According to the arboricultural assessment the quality of the trees is mixed, with over half in the low/ very poor categories. The trees located to the north-western corner form the better specimens. Species comprise Beech, Oak, Lime, Elm (all category B), and a large category A Sycamore tree. The trees along the boundary with the existing railway are Elm, Oak, Beech, Hawthorn, Sycamore and Maple.

The hedgerows comprise mainly Elder, Blackberry, Dog-rose, Ash, Hawthorn, Sycamore and Ivy. The boundary hedgerows have been identified to be in a fair structural and physiological condition and vary between 4-6m in height. The central hedgerow however is not in a good condition.



*View showing mature trees to the north-western boundary, which form the better specimens on site.*



*View showing line of early mature trees at the western site boundary, separating the site from the existing railway line.*



*View showing the central hedgerow in the distance, it is evident that the trees and hedgerow are not in a good condition.*

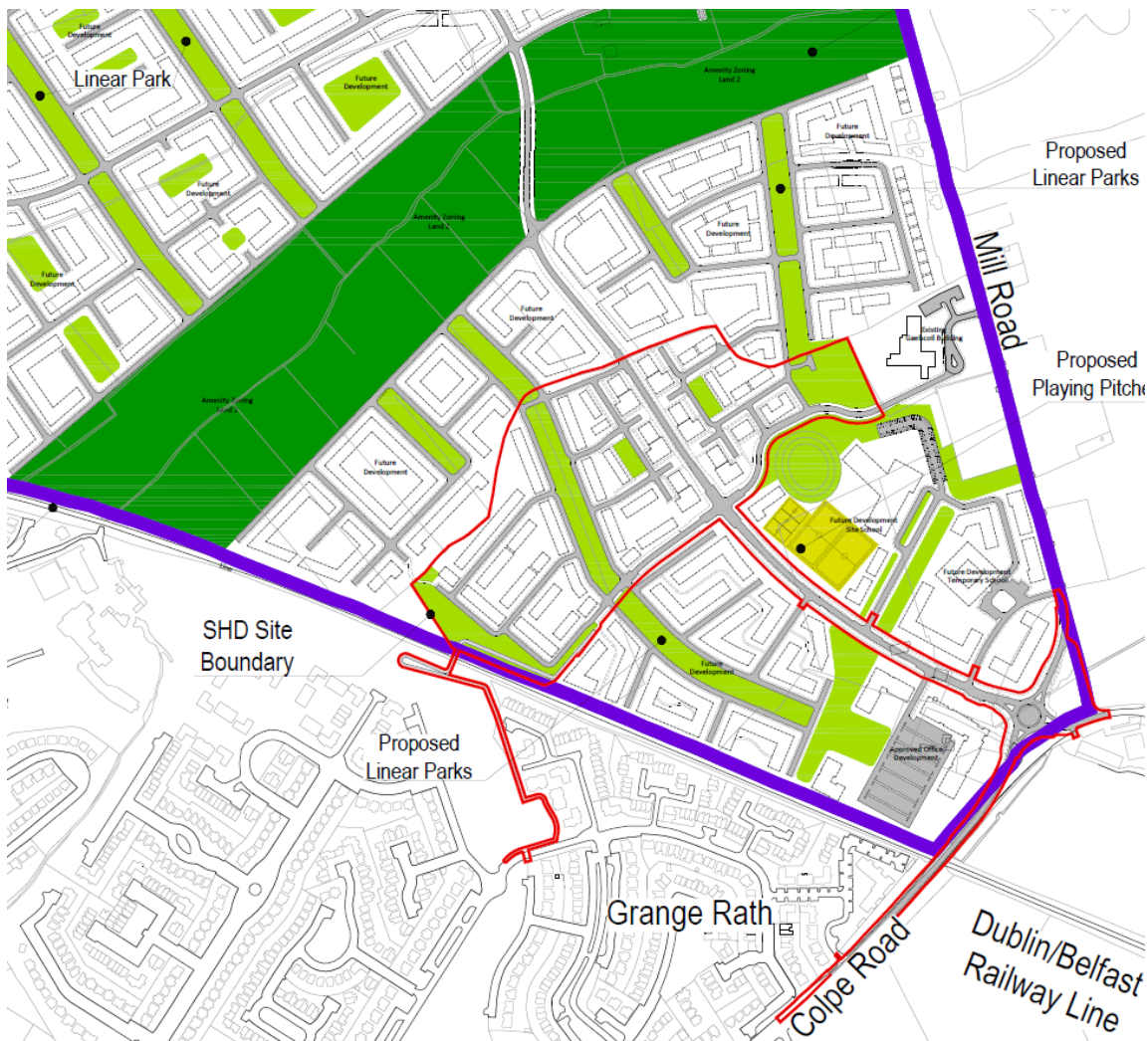
### **3 Landscape Strategy**

#### **3.1 General**

The proposals in this submission show a lively, innovative and durable landscape and public realm, which integrates the proposed development into the surrounding context and generates new public open space and routes throughout. The site and nature of the development demands a high quality, sensitive and subtle use of landscape materials which will deliver a landscape and open space strategy that responds to the site conditions and reaffirms its qualities. The proposed landscape strategy has been formulated not only by *Dermot Foley Landscape Architects* but by the entire design team and client. The integration of site engineering for drainage and utilities and the siting of buildings to maximize hedgerow/habitat retention are all integrated in a landscape plan which appears at the larger scale to be a simple and straightforward proposal. The interest and complexity of the strategy is at the detail level where the Linear Park breaks up into series of character areas comprising flat lawn areas, existing hedgerow and native planting, play area and seating nodes.

Within the overall landscape, the character of the existing site is utilized to create strongly identifiable spaces, while consistent landscape treatments link various areas, consolidating the overall scheme. The landscape proposal also acknowledges the wider master planning of the area and the lands intended for future development. The open parkland within the site is part of a much wider network of green space extending beyond the site in all directions. These green corridors link the development to its surrounding context, to the local schools, while also providing amenity space and green infrastructure (see figure on next page).





*Drawing showing how the site parkland sits within a much wider network of green space (Drawing by Duignan Dooley Architects).*

Similarly, to the east, the area of public open space helps integrate the development within the existing school and the wider context.

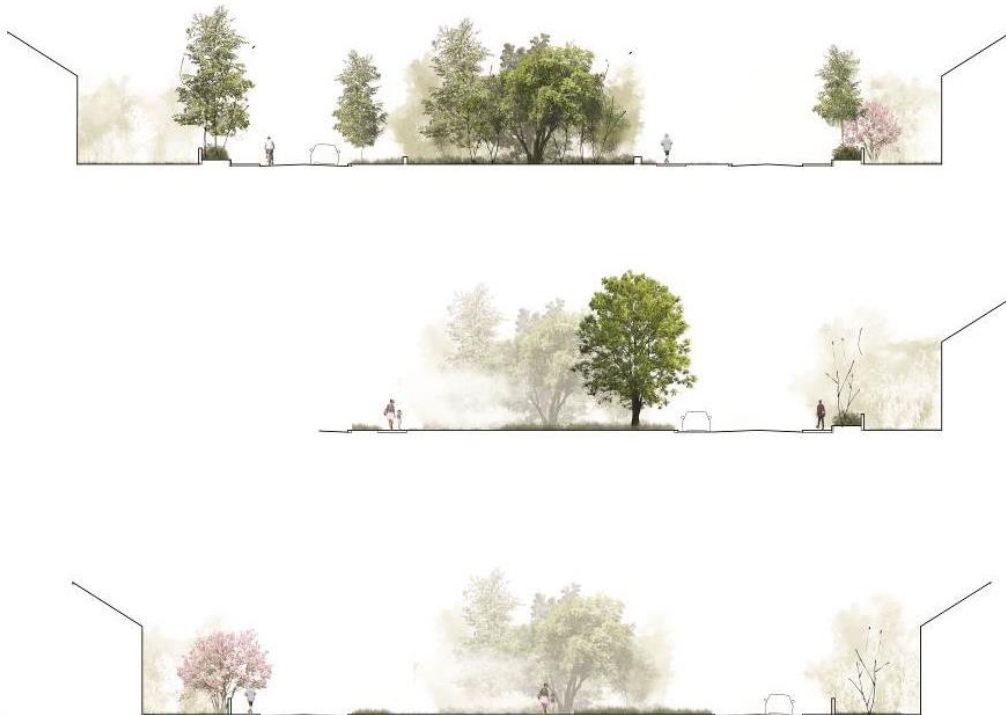
The landscape strategy is comprised of a number of components:

- A diverse, interesting and attractive range of spaces including expansive open spaces with play area and several smaller public open spaces with additional informal and adventure play;
- Integration of functional landscape and external works such as parking and defensible space within the overall strategy;
- Substantial and realistic retention of existing hedgerows and trees;
- Retention and new opportunities for the creation of habitat and ecological attributes of the site;
- Sustainable urban drainage systems throughout;
- A facilitation of future network and permeability.

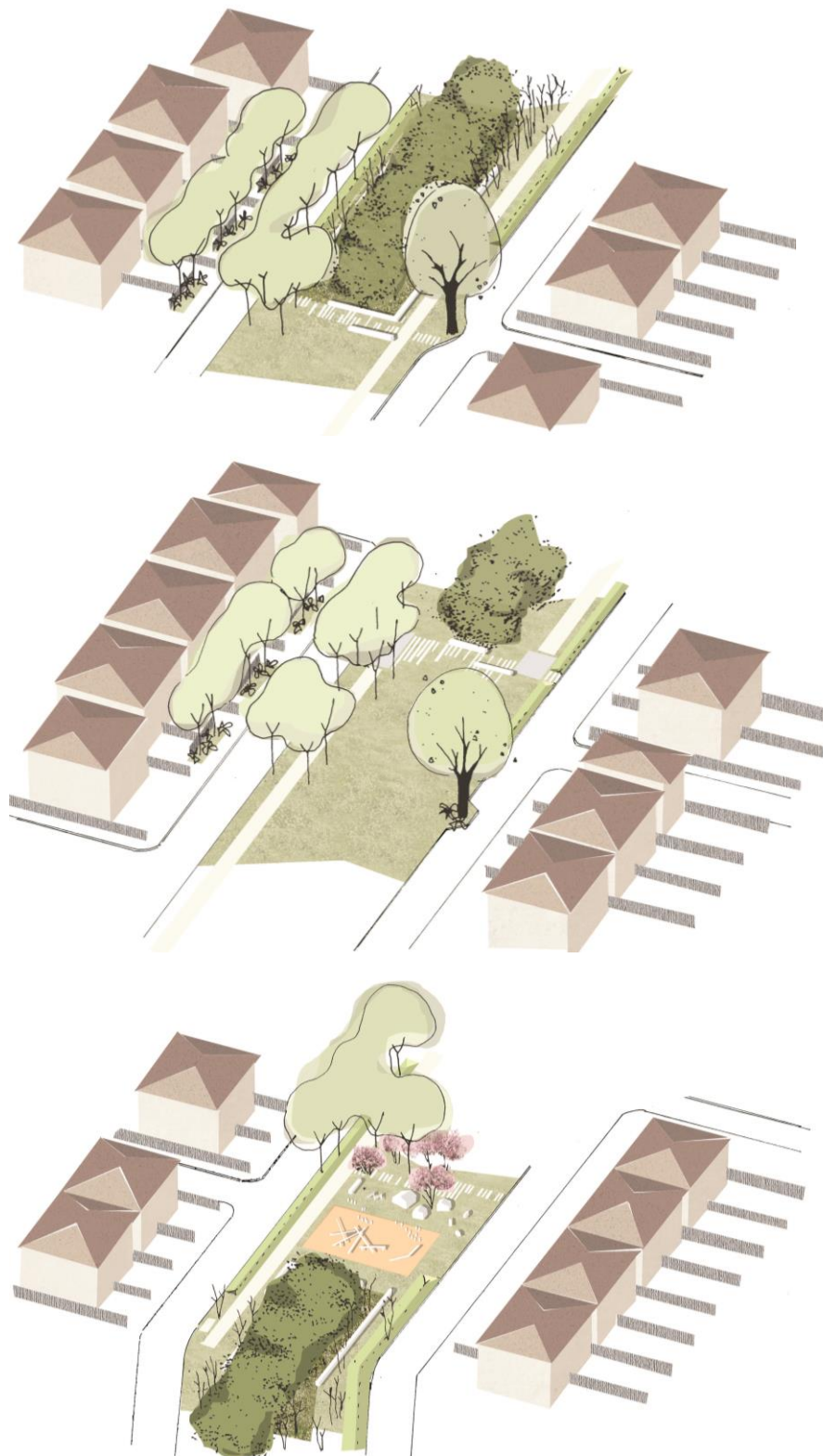
### 3.2 Public Open Space

Fully usable public open space is provided as part of the proposed development. Additional areas of open space are provided in certain locations to maximize retention and protection of existing vegetation along the boundaries. The public open space is located in and around residential areas providing opportunities for informal recreation, play and nature. The public open space is incorporated into the overall landscape strategy, and seeks to provide a diverse range of landscape and open space experiences. These diverse range of open spaces include: The Linear Park, the large open space adjacent to the existing school to the east of the site, the public open space to the west boarding the rail corridor, two smaller open spaces close to the apartment blocks and several areas featuring existing vegetation which are also accessible.

The central Linear Park is centrally located to ensure retention of the existing hedgerow as much as possible. It is overlooked from proposed houses to the north and west. Its central location ensures that the park is activated and used to its maximum potential. The landscape elements are arranged in such a way as to utilize as much of the space as possible and at the same time allow for adequate incorporation of sustainable urban drainage within the proposed scheme. A number of different character areas have been created within the wider collective space.



*Sketch landscape sections showing the various character areas through the Linear Park.*



*Sketch axonometric views showing the design development of the various character areas in the Linear Park (from top to bottom): 'Habitat' area with existing hedgerow retained; open lawn area with seating nodes and tree alignments, play area settled between trees and existing vegetation.*

A rectangular cut lawn area is situated at the northern part of the Linear Park. In collaboration with the engineers the topography has been modelled to create a depression in the landscape serving as an above ground attenuation basin, while the incorporation of a number of below ground attenuation tanks are also included in the scheme. This sunken landscape not only serves a functional purpose (attenuation), but it also acts as a sunken space which can accommodate ball games and other passive forms of recreation.

Further south, portions of the existing hedgerow and trees have been retained. By proposing a series of low plinths and seats designated 'habitat' areas are created, improving the ecology and biodiversity on site. This is achieved as a combination of planted native whip and forestry transplant areas as well as retained vegetation; these will be designed to allow natural processes to take place in a controlled fashion.

Areas of more conventional landscape contain additional portions of the existing hedgerow and incorporate series of seating nodes. A space with a larger extent of paving has been proposed to the centre of the Linear Park. It is seen as a transition space which will act as a fulcrum for intersecting pedestrian circulation. The proposed materials are to be constructed in a way which is sensitively integrated with the lawn and soft landscape. Selected pieces of large format paving and trees will bridge one material with another and create a rich layered space with seating and attractive herbaceous and groundcover planting. Large tree alignments along the periphery of the park further break up the geometry and provide screening from the road, adding an additional layer of complexity to the overall make-up of open space.



*Sketch plan showing design development of the Linear Park.*

### **3.3 Integration of Functional Landscape**

The landscape strategy incorporates the full range of functions required by the proposed development. These include circulation, parking, bicycle parking, access for delivery and emergency vehicles and sustainable drainage systems, including swales and retention areas, use of 'no-dig' solutions for the protection of trees, the specific and tailored routing of drainage and services in relation to Root Protection Areas (RPA) and the range of boundary treatments required to provide privacy for residents.

The surface water drainage strategy has been designed by DBFL Consulting Engineers to ensure that public surfaces do not drain into private land and private surfaces do not drain into the public realm. The choice of landscape materials reflects this strategy with porous/permeable products used where possible. A series of swales (shallow depressions in lawn areas) are located along the periphery of the Linear Park. They take surface run-off from the adjacent road. The selection of tree species is specific to these locations. In addition, areas of below ground and above ground attenuation have been located throughout the site. These areas will be dry at all times except during intense storm/ rainfall periods. No areas of permanent standing water are proposed. No surface water is proposed to be directed to areas where existing trees are retained.

### 3.4 Permeability

The main entrances to the proposed development will not be gated. The proposed development includes new public pedestrian and cycle connections across the site creating a direct link to the lands designated for future development. A wayleave is located to the north-western corner of the site, which will provide pedestrian and services links to neighboring lands, forming a wider network of interface. The overall site itself is permeable with large areas of open space and existing landscape retained. The new link road will provide permeability through the lands and act as the main access road to the development. Thus, the site will act as a node within the Mill Road/ Marsh Road district and provide important connections for vehicles, pedestrians and cyclists.

The proposed internal access roads meander through the proposed development and are broken up by raised tables with pedestrian crossing points to create a safer, calmer environment for all. In order to differentiate the cul-de-sac areas from the residential streets which provide routes through the development, it is proposed that coloured stone mastic asphalt is used to contrast the tarmacadam surface of the main roads. These areas will facilitate access to dwellings, parking and hammerheads/ turning circles for residents and visitors and at the same time allow for a safe and comfortable pedestrian use. All of the streetscape and open spaces are overlooked for passive surveillance.

A series of smaller pedestrian and cycle links provide future routes through adjacent lands to local destinations. A new pedestrian route is proposed over the rail line to the adjacent development. This route not only provides access and connectivity, but provides additional passive surveillance over the development, streetscape, and parklands.

### 3.5 Play

Dedicated play areas are located in areas of public open space. They comprise secure play areas surrounded by fencing and areas of natural play which are integrated into open space. Play equipment includes a climbing structure, trails of timber logs and balancing equipment. The proposed play equipment will be designed and manufactured in accordance with standards EN 1176 and EN 1177. Impact absorbing surface for specific fall heights from play equipment is proposed to mimic bark and is located where it is required and within the secure play area for 0-5 years. Furthermore the flat lawn areas on site can be used for a wide range of informal sports and play. Play equipment is outlined as part of drawing *201 Landscape Plan 1* prepared by Dermot Foley Landscape Architects, included in this submission.



*Clockwise from top left: Proposed Climbing Structure; proposed timber logs; proposed turning tire; proposed rotating balance beam.*

### 3.6 Proposed Boundaries

Drawing 202 *Boundary Plan* prepared by Dermot Foley Landscape Architects, included as part of this submission illustrates sections of proposed and existing boundaries. The general boundaries strategy involves the retention of most of the existing trees and hedgerows. Where public open space is located along a boundary native hedge planting is proposed. Along the main road with adjacent apartment buildings, a low plinth and railing with tree and hedge planting is proposed. There will be regular openings within this plinth and railing boundary to allow for access to units at ground floor level as well as access to cores. A welded mesh panel fence is proposed to private back gardens to the outside of the development and is located to the inside of existing vegetation. This visually permeability allows for passive surveillance along the existing vegetative strip. Refer to drawing 202 *Boundary Plan* for further detail.

## 4 Planting

Drawing 201 Landscape Plan 1, and 201 Landscape Plan 2, prepared by Dermot Foley Landscape Architects includes a detailed schedule of proposed planting and illustrates the location and extent of mown grass, long/unmown grass, bulb, groundcover, hedge and tree planting as well as existing ground flora and trees to be retained and managed.

### 4.1 Tree planting

New trees are proposed in order to compensate for the removal of existing trees. They will also improve the species mix on site. The proposed tree species are selected for longevity, suitability to local soil conditions and microclimate, biodiversity (native species) and where requires suitability to close proximity to residential buildings. Proposed tree sizes range from semi-mature (35-40cm girth) specimen trees to multi-stemmed and native forestry transplants and whip planting. Additionally, improved biodiversity is proposed to be achieved by the planting of pollinator friendly species. Tree species have been specified in accordance with the *All Ireland Pollinator Plan (2015-2020)*. Typical tree species are illustrated on the following pages.







Selection of proposed pollinator friendly tree species, clockwise from top left: Wild Cherry (*Prunus avium*), Pear (*Pyrus calleryana* 'Chanticleer'), Apple (*Malus sylvestris*), Amelanchier.



Selection of proposed native tree species, clockwise from top left: Hawthorn (*Crataegus monogyna*), Holly (*Ilex aquifolium*), Hazel (*Corylus avellana*), Oak (*Quercus* spp.).



Selection of typical moisture tolerant tree species, from left to right: *Salix pentandra*, and *Salix caprea*

#### 4.2 Hedge, Groundcover and Bulb Planting

Low planting is utilized to make and reinforce sub-spaces within the larger landscape spaces, for visual screening, defensible space, visual interest, ecological purposes and to guide or direct people’s movement. The low planting is conceived as subtle layering of greens within the open spaces. The planting is layered as follows; lowest - bulb planting, groundcover planting, highest - clipped hedge planting. Similar to the tree strategy, groundcover and herbaceous planting have been carefully selected to include pollinator friendly species as per *All Ireland Pollinator Plan (2015-2020)*.



Typical species for low clipped vegetation, or boundary treatment with fencing, from left to right: *Fagus sylvatica* (beech), *Caprinus betulus* (hornbeam), *Crataegus monogyna* (hawthorn).



Typical groundcover species, from left to right: *Helleborus spp.*, *Hemerocallis sp.*, *Asplenium scolopendrium* and *Luzula sylvatica*.

## 5 Hard Landscape Materials and Finishes

The selection of paving and other landscape materials is determined by proposed function, longevity and durability. The extent of materials and the locations where a transition is made from one material to another are determined by drainage and other sustainability issues. Paving materials where practical are proposed to be constructed in a way which is sensitively integrated with lawn and soft landscape, in order to minimise the impact of hard landscape surfaces. Primary vehicular, pedestrian and cycle circulation is proposed as a durable, limited range of neutral materials with robust construction. The secondary vehicular routes are designed to 'play-down' the impact of the road infrastructure in the landscape setting. Secondary pedestrian routes and private spaces are proposed to be of 'flexible' construction and in some cases a mix of paving and lawn. Permeable block paving is proposed for the private front curtilage.



*A range of paving details, clockwise from top left: natural stone paving in bituminous macadam (CIPD campus by Dermot Foley Landscape Architects), natural stone paving with various finishes (source unknown); and paving in soft landscape (Project by Hollander design).*

**END**