



# LANDSCAPE PROPOSALS

CARCUR DEVELOPMENT

Landscape Planning & Design Consultancy

P. Nolan, HNC.Hort.

# LANDSCAPE PROPOSALS FOR CARCUR SITE DEVELOPMENT.

## EXISTING SITE

Carcur is an area of undeveloped waste land to the north of Wexford town. It occupies an area of 13.84 Ha. which consists of varied areas, of gravel pits, woodland, grass margins, hedgerows, wetlands, scrub, stone and sand shoreline. It has a mixed and varied wildlife habitat and has remained undisturbed for several years. Occupying an area close to Wexford town with easy access it has been used by people to walk dogs, hunt, fish, and gather for drink associated unsocial behaviour.

Under the Wexford County Development Plan the land has been zoned for residential development. The site also provides an access opportunity route for a new river crossing, linking Carcur with Crosstown and beyond.

The site is bounded by the river Slaney to the North, South, and East, with extensive shoreline along the river. The shoreline is protected by the Wexford Harbour and Slobbs SPA and Slaney River Valley SAC. The western boundary is defined by the Dublin Rosslare Rail Track that runs along the extent of the western boundary. Adjacent to this rail track on the western side, a semi natural woodland strip separates Carcur from public Amenity sports grounds, incorporating Wexford Rugby grounds, Soccer and Gaelic pitches.

Access to the site is gained via a pedestrian pathway over the Dublin- Rosslare Rail track, defined paths and lanes are non-existent, with tracks worn by people, and animals being most convenient way of accessing the principal areas.

Gradients on site are localised with the site being reasonably level, falling to the River Slaney. There are some localised hollows and fills that have been brought about by land usage over a period.

Vegetation on site is varied and localised within the site. There is a varied and mixed Flora and Fauna habitats throughout the site, with protected areas to the south, and along the shoreline, where Otter habitats are protected. "See Ecologists reports for greater detail"

The northern section of the site is Bounded by a young Birch *Betula Pubescens* woodland with Mixed Oak "*Quercus Petraea*" & "*Quercus pubescens*" species. Some Larch "*Larix Decidua*", Pines "*Pinus Noblis*" & "*Pinus Cortaota*", and are also present.

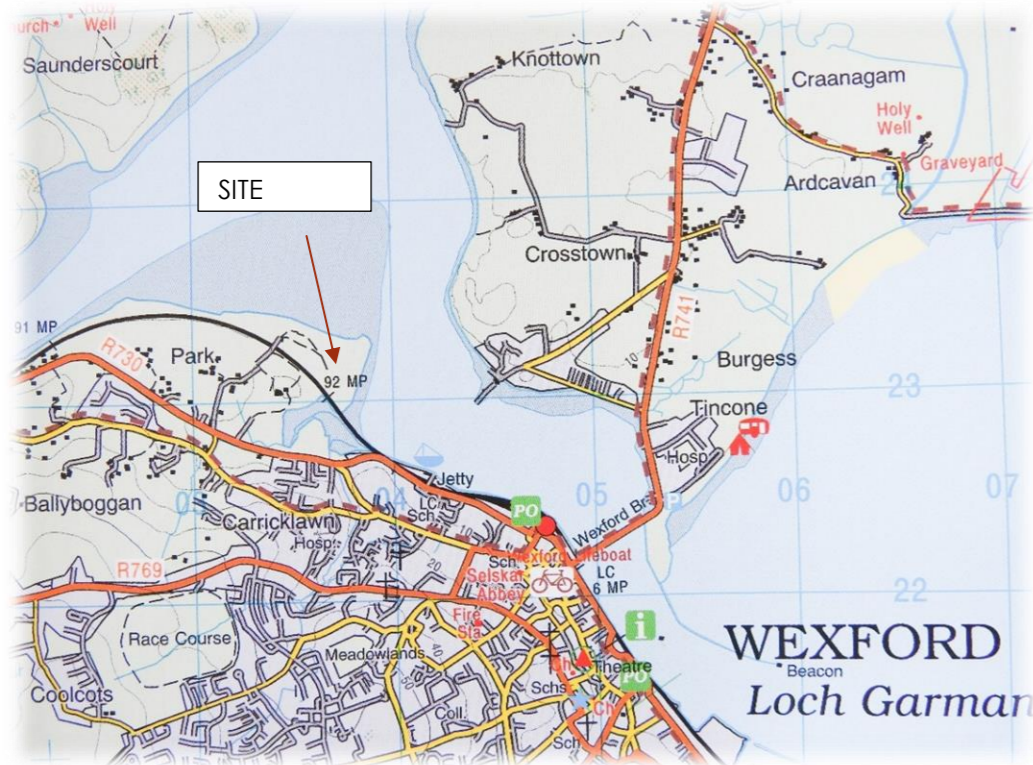
To the eastern boundary the site changes with large areas of open grassland with willow species and Rushes, as the site gets marshier. This grassland is dense and sponge in places with ponds and marshland providing an excellent wildlife habitat. The coastal area is fringed with Willow, blackthorn, and hawthorn.

The southern boundary has much denser scrub, mainly Alder "*Alnus Glutinosa*" & Willow "*Salix Cinerea*". There is a tidal area of mature rushes and reeds to the south which is protected under the SPA boundary and Special Area of conservation 2017.

The western boundary is less vegetated. The rail track fringes the site and has been maintained in a non-vegetative state by Irish Rail to prevent encroachment on the line. Hawthorn, Blackthorn, Willow, Alder, Birch are mixed and naturally vegetated along this boundary, in mixed groups or as individual trees spread broadcast along the boundary. Bramble, Gorse and Broom are also present.

The central areas of the site have vegetated gravel beds with grass land which has started, to reclaim lands that were subjected to deposited materials, or excavated areas of hollows and embankments this natural regeneration, is evident across the site.

## SITE LOCATION



OS: MAP OF AREA

## AERIAL VIEW OF THE SITE



AERIAL IMAGE

## SITE PROPOSALS

Under the Wexford Co. Development plan the area denoted as Carcur has been zoned for Residential development.

Permission is sought by Willian Neville and Sons for: A total of 413 residential units consisting of 175 houses (12 four bedroom detached houses + Garages, 20 four bedroom Semi-Detached houses, 2 four bedroom corner detached houses, 80 three bedroom Semi Detached Houses, 20 three bedroom terraced houses, 7 three bed end of terrace houses, 4 three bedroom corner houses, 20 two bedroom terraced houses, 6 two bedroom end of terrace, 4 Semi-Detached houses), 7 apartment blocks with a total of 238 Apartments: (Block One: (47 units over 5 floors: 40 two bed, 7 three bed), Block Two: (50 units over 7 floors: 4 one bed, 38 two bed, 8 three bed), Block Three: (45 units over 7 floors: 3 one bed, 34 two bed, 8 three bed), Block Four: (20 units over 4 floors: 1 one bed, 19 two bed), Block Five: (38 units over 5 floors: 1 one bed, 37 two bed,) Block Six: (19 units over 4 floors: 3 one bed, 15 two bed, 1 four bed) Block Seven: (19 units over 4 floors: 3 one bed, 15 two bed, 1 four bed)). Together with two crèche facilities (Crèche A: 346.4 sqm floor area. Crèche B 395.3sq.m floor area). A total of 767 Car parking spaces (248 private parking spaces, 501 public spaces and 18 creche spaces). and all associated site works". The proposal shall be delivered over four phases of development. An EIAR (Environmental Impact Assessment Report), an NIAR (NATURA Impact Assessment Report) and a SSFRA (Site Specific Flood Risk Assessment) have been prepared as part of the planning application.

## SITE LAYOUT PLAN

North



PROPOSED SITE PLAN

## LANDSCAPE ZONES



## ZONES

The proposed development has been designed to protect the existing shoreline and habitat. Buildings and access roads have been placed away from the shoreline, open amenity space has been created to provide additional usable space for enjoyment and play. The main objectives of the landscape plan is to aid the seamless insertion of the proposed residential units and infrastructure into this landscape sensitive area and to mitigate against disruption during the initial construction phase – protecting the existing Habitat, Flora and Fauna of the area.

The medium to long term objectives will be the establishment of protected wildlife zones, with new green areas and corridors for re-establishment of wildlife species and the creation of greater bio-diversity in the area.

Soft and hard landscape materials will be selected to encourage wildlife establishment where possible.

Hard landscape materials, using gravel pathways with timber edging, rock outcrops, split stone walls and seating will allow small invertebrates to colonise public spaces. Wild flower meadow areas will be sown to the fringes of Amenity park land to create a usable space for play and varied habitat.

Open habitats such as wildflower meadows in urban settings for the provision of native or naturalised grasses, wildflowers and flowering plants offer several advantages:

- Plant diversity attracts insects and other invertebrates (including butterflies, bees, spiders and millipedes), birds and mammals
- Flowering species add a changing palette of colour to the urban environment throughout the seasons
- Active involvement of the local community in managing the site encourages ownership values to be fostered – activities may range from mowing to the collection of seeds for use at a new location or for sale.
- Opportunities for education and recreation abound (ranging from nature studies to art lessons).
- Even small plots of wildflower planting can change the feel of a setting, so that the creation of a wildflower meadow as part of an urban greenspace can bring a little piece of countryside into the town.

#### River Shore line

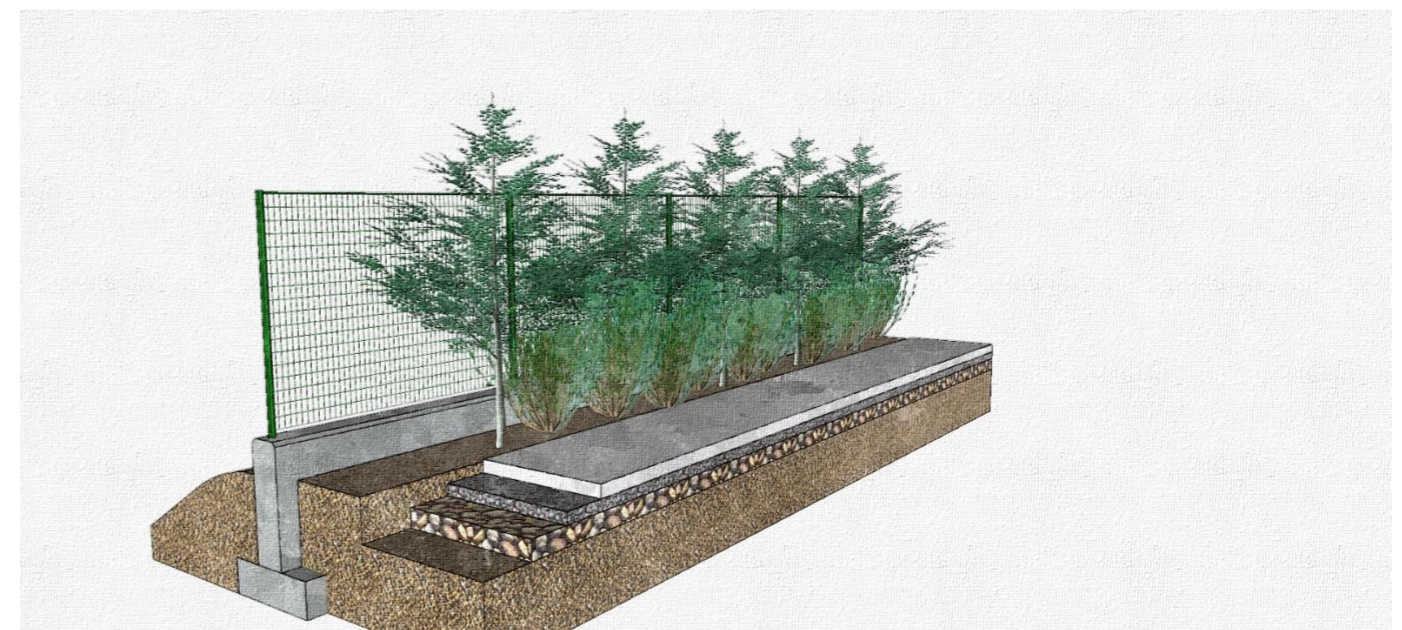
This protected area will be maintained in its natural shape and form. Scrub land to the South will be retained leaving a natural buffer zone. The reed beds located to the south are within the protection area and as such will not be disturbed. Scrub land extending North east along the Slaney will be maintained, refuse and debris scattered or washed up on the shoreline will be removed and recycled where possible. To the east of the site there is an otter pond located in grassy marshland which will need relocation to the denoted position. The establishment of this otter run is a priority, and attention to detail under the supervision of the ecologist is required. The proposed construction method will be agreed on site following additional excavations to establish the porosity of the sub soil, and a decision will be made based on these excavations whether or not a liner is required.

Moving North west along the shoreline the vegetation is dominated by Grass and scrub land. These areas are under the protection of the SPA and will not be impacted upon by the development. Small copses of young Birch with Oak are located to the North-western corner of the site. Those within the protection area will be retained, self-seeded within the site will be removed depending on the required cut and fill of the construction area.

It is proposed to close off this area and protect it from public access. A gated entrance will be provided for maintenance and supervision by authorised personal only. This will be done by erecting a weld mesh fence – with base wall to prevent dogs digging under the fence.

The insertion of the wall will impact on some of the existing vegetation during the construction, this will be mitigated against by extensive new hawthorn planting along the length of the fence.

- Providing additional screening to the protected zone and softening the impact of the fence.
- It will act as a secondary deterrent to anyone wishing to gain unauthorised access.
- Hawthorn is an excellent species to encourage wildlife as it is one of the first trees to flower, and berry bringing spring relief to Birds and small mammals.



PROTECTIVE FENCE SCHEMATIC

### Rail line Boundary:

The rail line boundary to the west of the site provides its own set of challenges. Irish rail maintains the existing track line cutting back and removing any extraneous vegetation that self-seeds or becomes overgrown. The margins along the track line tend to be low grass and bramble, these are important habitats for small mammals and invertebrates.

There are several semi-detached units located close to the rail line. These units will require additional screening to provide privacy and security. It is proposed to plant a new hedgerow of mixed native trees and shrubbery to reinforce the existing vegetation line. This planting will extend along the full western boundary from the new site access to the existing Birch woodland to the Northwest. A new post and wire fence will be erected along the rail line boundary. All planting will be carried out within the site constraints.

### Private space:

All units will be allocated private space areas, either as private gardens or common space, their design will vary depending on their location, size and function. In general, this will include fenced rear gardens seeded with lawn seed mix 2. Small terrace areas using 400\*400 or 600\*600 paving flags or similar. All rear gardens will have a minimum of 1 no. tree whose girth will be no less than 14-16 cm, staked and tied using a "H" frame support. Front gardens will be subdivided by low walls or hedging. Driveways where applicable will be brick paving 200\*100\*80 mm with banding to match. Bin storage areas will be provided to all units with rear access gates. Tree planting to the front gardens will be carried out as part of the general landscape scheme, it is envisaged that tree planting will be carried out to reflect 'Avenue Style' where a single or varied ornamental species may be used to define an area.

### Public Space:

The proposed development has several open space areas that are accessible to the public. These spaces are located throughout the site and are indicated as follows.



### Public area (A)

Located to the northwest of the site this area encompasses an area of 6021 msq The focus of landscape design for this area is open parkland, providing an area for recreation and play. The central area will be sown and maintained as lawn for sports play. A hogging pathway will extend from the public path up to and along the northern boundary. This pathway will have a hogging surface edged with 6\*2 pressure treated timber edge. A rest area with seating and boulders is proposed along this route with views over the parkland. Additional benches will be provided along the

route and adjacent to the public pathway. Path margins will be seeded down with wildflower meadow grass "of native Provenance". With a larger area of wildflower meadow adjoining the public path. The proposed otter protection fence will be extensively planted with hawthorn and mixed native tree species to provide good screening and a protective vegetation barrier.

The main parkland area will be skirted with larger trees of Beech, Oak and Horse chestnut species with Ornamental species added to provide a contrast, and autumnal colour. Shrub and grasses will be used to provide groundcover and underplanting. Extensive bulb planting will be carried out to provide early spring colour with Tulips, daffodils, bluebells, crocus being planted in large groupings.



VIEW LOOKING SOUTH EAST – PUBLIC AREA A



VIEW LOOKING SOUTH – PUBLIC SPACE A



Public area (B)

Located adjacent to the rail way line to the rear of apartment Block 5. This area encompasses an area of 739 msq. Bounded by apartment blocks 4 & 5 and near the railway line this area requires screening. It is proposed to plant a new tree copse parallel to the rail track to reinforce existing planting and enhance screening. Specimen tree planting will be carried out in a linear line parallel to Apartment block 5



with additional specimens in front of apartment block 4. The main area will be kept in lawn to provide a recreational area.

Mixed grasses and bulbs will be used to create a sway of planting adjacent to apartment 5. Climbers will be planted to screen bin storage areas, with trellis screens located to obscure their view. Additional benches for public seating will be located in accessible areas away from bin storage.

### Public area (C)

Is located centrally on site and occupies an area of 934 msq. This area provides a central open green space and is visually important as you exit the site heading south east. The main emphasis of the landscape proposals here was to maintain the open flow through the site, and to provide a focal point of high quality, drawing your view towards the new sky line. The shape and flow to the area is based on the meandering path of the River Slaney. This will be reflected within the block planting scheme. A central seating area with modern contemporary seating structures is located at a central point of the green space, but also central to the view up the avenue creating a sculptural feature that is functional and contemporary, requiring little or no maintenance.

This area will have a varied array of tree and hedge planting, with trees planted throughout to green up this space, to soften the new skyline.



### PUBLIC SPACE AREA C



### SEATING AREA – AREA C

### Public area (D)

Public area D encompasses an area of 2610 msq providing a buffer zone adjacent to the natural wildlife habitat. The main landscape emphasis along this area is to provide a protective zone to the wildlife area, while creating a rural landscape for public enjoyment.

Extensive native trees and hawthorn hedgerows will be planted by the security fence.

Wildflower meadow grassland will form part of the fringe with maintained grass verges sweeping out to the pathways. Extensive tree planting will be carried out adjacent to the public path. New seating areas will be provided for public use.

### Public area (E)

Area E ( 510msq) is located perpendicular to the protected zone at the end of a long avenue.

We have carried the same theme through this area as we had in area C. The central area is kept open to allow a clear line of site through the green space, towards the Slaney. Block planting will create meandering elongated flows through the space.

Tree planting will give height and screen the building forms. Hard landscape seating areas will be constructed from Split stone caged within Gabion baskets and dressed in new oak sleeper seating, shaped with pencil edges to allow dual vista – outward or



inward views. Extensive herbaceous planting with mixed native bulb planting will form seasonal colour and an important wildlife habitat for Bees and pollinators.



VIEW SOUTH- AREA E

proposed will be carried out under the guidance of the ecologist and in line with the recommendations as outlined within the ecology report.

All construction works will be confined to areas away from this area, all required work within this area is to be carried out under the strict supervision and guidance of the ecologist.



NEW OTTER -POND SECTION SCHEMATIC

#### Public area (F)

Area (F) ( 2620 msq ) is the second largest area of public space, it is also the most sensitive. bordering the proposed Otter pond. Having taken advice from the ecologist it was agreed that the public use of this area be directed away from the otter pond. To achieve this, it is proposed to heavily plant a cordon around the proposed pond location, and to add additional island tree planting to break up this space.

A larger usable area will be set aside to the south, for ball play and walking. Seating areas will not be in this area to prevent late night congregating, and unsocial behaviour. Light selection and location is to be agreed with the ecologist to provide the optimum achievable ambience, that least disturbs the wildlife population, or interferes with their natural day to day activities.

A more detailed report has been carried out by the ecologist on the setting up of the pond habitat area and its relocation. From a landscape perspective all works

#### Gravel pit

The existing gravel pit on site, containing the plant common Cudweed ( Filago Vulgaris and other Calcicolous plants, will be recreated at the north end of the site. A flat gravel bed with a south facing bank will be created and protected by the fence line to provide a suitable habitat for common cudweed and other wildflowers to grow. The gravel bed and banks will be maintained by annual strimming and light scarification to prevent encroachment by scrub species. Gravel banks will also be created near the pond to provide additional shielding. **Ref to ecologist report for more detail**



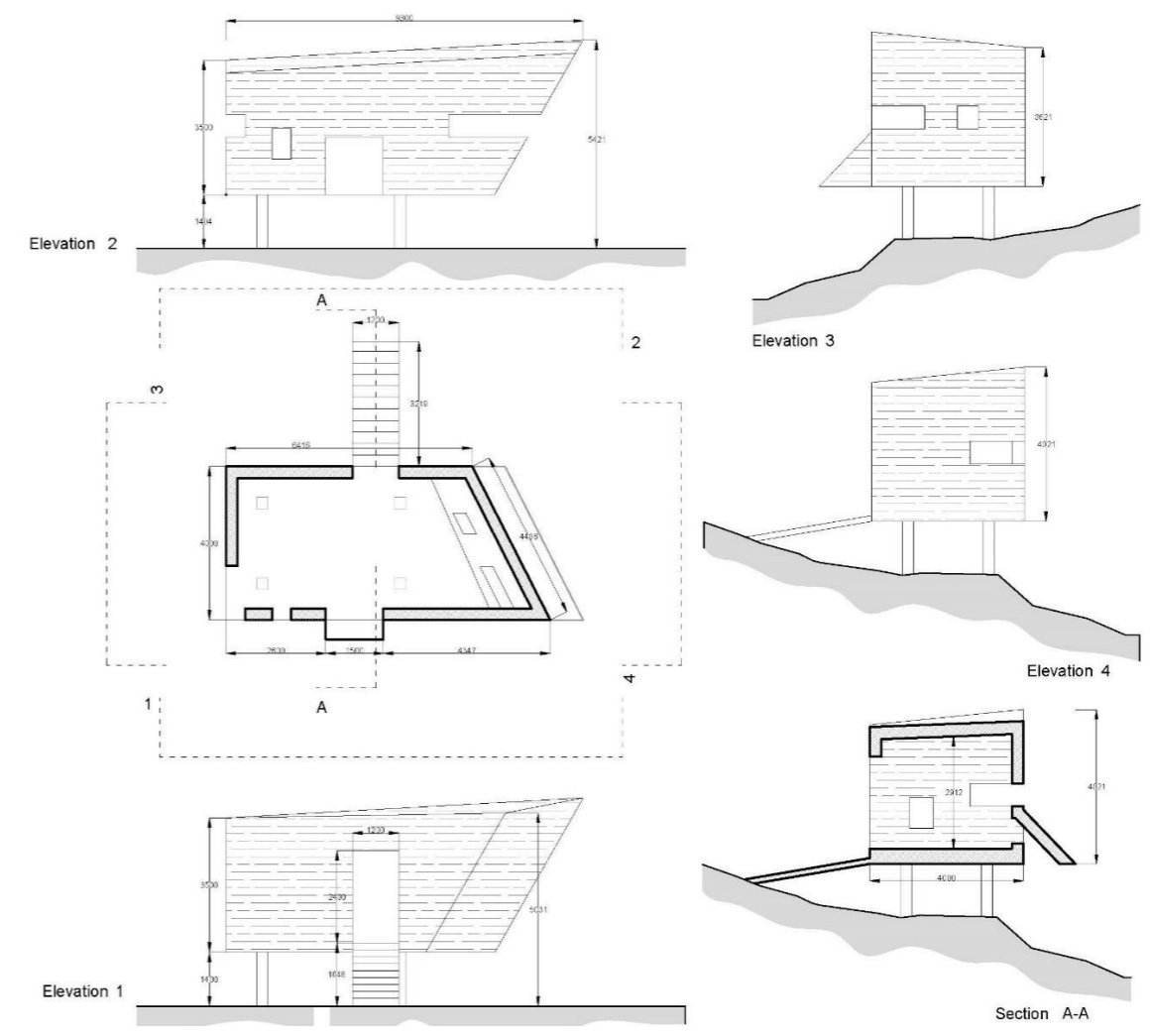
*Filago Vulgaris*

A new platform 'Bird Hyde' will be introduced to overlook the River Slaney. This will provide a viewing platform for the public to enjoy the views to the river without encroaching onto the preserved lands.

This platform will be constructed in accordance with the Architects specification, in association with the ecologist - in order to minimise the impact on the existing habitat, availing of the best views.



This Bird Hyde will be partly screened by extensive tree planting and over time will become part of the Landscape.



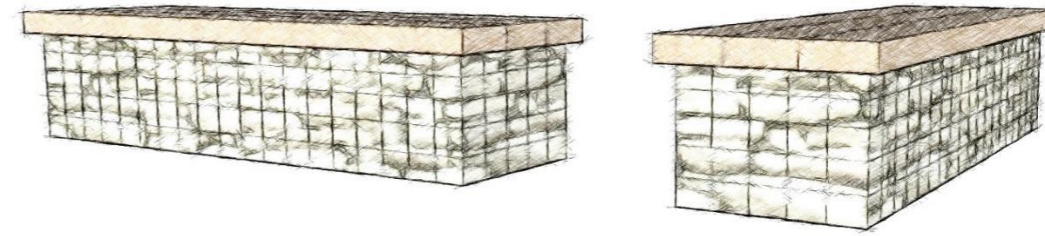
Plans, Elevations & Section

Public area (G)

Area G is located to the south eastern section of the site. It has an area of (495 msq ) consisting mainly of maintained lawn areas for recreational play. Tree planting is located adjacent to pavements, with the central areas reflecting the sweeping view theme running throughout the site. Planting will be block planting style with mixes of herbaceous and ornamental grasses. Bulbs will be planted throughout the area to provide seasonal colour. Benches and seating will be gabion basket split stone, with Oak sleepers as in Area E.



VIEW SOUTH- AREA G. LOOKING WEST



GABION BASKET SEATING – PROVIDING DRYSTONE WALL HABITATS FOR SMALL INVERTIBRATES



### Public area (H)

Area (H) is a mixed area, providing additional carparking space for apartments and household use. From a landscape perspective it is a key area that contains a buffer zone of existing mature mixed scrub, protecting the reed and grass marginal beds to the west. It is proposed to heavily plant all along the existing scrub retaining the existing vegetation and habitat. This area provides an excellent opportunity to plant a mix of evergreen and deciduous trees with wide band planting creating a secondary buffer zone to the reed beds and screening the Irish rail tracks from view looking west and the development looking east.

Maintained grass margins will border the new planting with seasonal colour provided by native bulb planting. Ground cover planting of mixed native grasses and sedges will promote wildlife establishment and bio diversity.



interest. Plant form type and texture will add to the tranquillity feel of the location. Feature rocks strategically placed will create natural sculptures, that have multifunctional use.

Specimen tree planting will draw your eye skywards and soften the building form.

Modern contemporary exposed polished concrete seating will create functional sculptures that sit within the landscape, with minimum maintenance requirement.

Grasses, and mixed herbaceous planting will provide the basis for ground cover with extensive natural bulb planting throughout to give early seasonal colour.

These spaces also contain public parking bays with 48 parking bays close to apartment Block 2 and an additional 63 parking bays at Block 3.



### Public areas (I & J)

Located to the rear of apartment blocks 2 &3 these open spaces mirror each other.

Their design is to create open areas for public use, with visual interest from a height.

The spaces reflect areas for social meeting and gathering, with large public seating areas massed in central locations. Accessed by a myriad of assorted textured surfaces both in soft and hard landscape forms. Gravel pathways defined by timber edging. Intermixed with curved grass pathways, and block planting swathes provide areas of



SEATING AREAS FORMAL AND INFORMAL



To the street side of Apartment blocks 2 & 3 a formal street scape will be created with Mixed car parking bays – defined by grey and charcoal brick pavements (Kilsaran or similar) Country style kerbing, and Shelbourne silver granite paving Flags.

Tree Grills- "Hart cast Iron" or similar will soften the car parking areas creating sleek public space for access to the adjoining areas.



#### Avenues.

All avenues will have linear tree line planting each side of the carriageway.

Tree grills will be used within hard landscape surfaces to soften parking bays and large pathway junctions. Where junctions require clear line of site for Vehicular traffic, trees are not to be planted within the required line of view.

#### Private gardens.

Front gardens, In general front gardens as defined in the architects layout. Walls and site boundaries as detailed in wall 'Type' and details.

(See architects plans).

Each site will have either off street parking, or communal parking as defined. Low hedgerows of Beech, Escalonia, or Privat will subdivide front gardens creating a living fence.

Tree planting will be incorporated into front gardens where possible, or form part of Avenue planting, where Avenue style has preference, i.e apartment blocks.

#### Rear gardens.

Rear gardens will be fenced or walled depending on the location and adjoining nature of the site, External boundaries will be block and render walls, internal timber fences or as defined by the architect.

All private gardens will have small terraces, with lawn areas cultivated and seeded.

Tree planting to rear gardens will be carried out to provide screening between properties.

All properties will have Bin storage facilities, and gated access.

Public footpaths and roadways will be as per the engineer's design and specification.

Tactile paving to be incorporated – see engineers design.

Services and drainage – see engineers design.

### LANDSCAPE SPECIFICATIONS:

#### SUBSOIL FORMATION

Formation levels shall allow for the following depth of Class 5A topsoil, after settlement and cultivations:

Grass Areas: 200 mm. Shrub Planting 350 mm

Make up excessive depth with subsoil material before top soiling. This material shall be clean subsoil (soil layer extending between the natural topsoil and the parent material), free draining, free from rubbish, building contamination, large stones/rocks greater than 250mm. Subsoiling operations shall be carried out in layers with each layer being lightly consolidated with a maximum depth of 250-300mm per layer.

Allow for topsoil to stand 30 mm proud of all kerbs, paths, edgings and manhole covers etc.

#### TOPSOIL -GENERAL

Topsoil for use in all landscape areas shall be subject to the inspection and approval of the landscape architect before spreading.

Topsoil will be premium grade topsoil of high intrinsic fertility, loamy texture and good structure and shall conform to BS3882. It shall be free from pernicious weeds including dock, thistle, stinging nettle, ragwort and couch grass. It shall not have been compacted and shall not be in an inert state.

It shall be acidic, pH 5.5-6.5 and free from stones over 50mm in diameter. It shall be free from subsoil, sods, roots of trees and shrubs, plastics, metals, paper, brick, concrete or any other foreign object. Topsoil shall be from the original surface layer of grassland or cultivated land, to a maximum depth of 200 mm. Soils from woodland, heathland, bog or contaminated land will not be acceptable. Do not strip from under the canopy of any tree, nor closer than 4 metres to a hedge.

The organic content shall not be less than 5% (dry weight). Where the soil contains more than 60% sand, the organic matter shall not be less than 6% (dry weight).

#### TOP SOILING

Earthworks are to be completed, debris removed from site and formation approved by the Landscape Architect before any topsoil is spread.

Topsoil shall not be spread over any area of the site indicated until preliminary ripping operations are complete. Once the topsoil has been spread, no access will be allowed for construction plant and machinery. Site preparation and soiling operations shall take place only in suitable dry site and weather conditions. Any material spoiled by work in unsuitable conditions shall be made good at the Contractor's expense.

Final grading is to be carried out to ensure a true specified level and slope and to avoid dishing or other depressions where water may collect.

The use of a heavy roller to roll out humps will not be permitted and any area that becomes unduly compacted during the grading operations shall be loosened by forcing or harrowing. The level of the topsoil is to be at least 30 mm above all paved areas to allow for shrinkage or settlement.

#### FINISHED LEVELS

Localised hollows and mounds are to be levelled out and areas so finished that they drain to hard standing areas or elsewhere as indicated.

Where the required grades, shaping of ground, cross falls etc. are not shown precisely on the drawings, the Contractor shall obtain directions from the Landscape Architect.

All levels to be approved by the Landscape Architect.

#### Topsoil for Tree Pits

Planting pits for standard trees will be dug and backfilled with Class 5B topsoil by the landscape sub-contractor. Volume of topsoil to be as follows: Extra Heavy Standard Trees 1.2 cubic metres Select Standard Trees 0.6 cubic metres Multistem trees 0.6 cubic metres

#### DEBRIS

Provide a tip to be agreed with the Engineer for disposal of subsoil excavated from tree pits, and for stones, rubble and rubbish removed from grass and planting areas during cultivation by landscape sub-contractor.

#### REINSTATEMENT WORK

Reinstate all ground driven over and otherwise disturbed to even flowing gradients. Match reinstated levels to those of surrounding ground. Finished levels shall be free of humps, depressions and vehicle tracks. Rainwater shall not lie on reinstated ground nor on adjacent areas.

#### PLANTING SPECIFICATION.

##### MATERIALS

All plant material shall be good quality nursery stock, free from fungal, bacterial or viral infection, Aphis, Red Spider or other insect pest, and physical damage. It shall comply with the requirements of Part 1: 1965 Trees and Shrubs section of B.S. 3936, Specification for Nursery Stock.

All plants shall have been nursery grown in accordance with good practice and shall be supplied through the normal channels of the wholesale nursery trade. They shall have the habit of growth that is normal for the species.

Except for any cultivated varieties or exotic species which do not set viable seed in Ireland, all plants shall have been grown from seed.

The Contractor will be deemed to have advised his suppliers of the relevant sections of this specification, including all protection required, at the time of enquiry and shall in all cases be liable to replace materials brought on site that are not in accordance with this specification.

##### SPECIES

All plants supplied shall be exactly true to name as shown in the plant schedules. Unless stipulated, varieties with variegated or otherwise coloured leaves will not be accepted, and any plant found to be of this type upon leafing out shall be replaced by the Contractor at his own expense.

Bundles of plants shall be marked in conformity with the relevant part of B.S. 3936. The contractor shall replace any plants that are found not to conform to the labels. An inspection of plants shall be undertaken prior to planting to ensure quality control.

#### EXTRA HEAVY STANDARD & SELECT STANDARD TREES

Extra standard trees shall have a total height of 4.5 to 5.0 metres and a girth of 14-16cm at 1m above ground level or as specified. Select standard trees will have a total height of 3.0 to 3.5 metres and a girth of 10-12 cm at 1m above ground level or as specified.

Trees shall have a sturdy, reasonably straight stem, a well-defined and upright central leader, with branches growing out of the stem with reasonable symmetry, or a well-balanced branching head according to the Schedule. The crown and root systems shall be well formed and in keeping with the nature of the species. Roots shall be in reasonable balance with the crown and shall be conducive to successful transplantation.

Trees shall be supplied root-balled. They shall have been regularly undercut or transplanted. They shall have been lifted carefully to avoid tearing of major roots and to preserve a substantial proportion of smaller and fibrous roots. Trees shall have been grown on their own roots. Budded or grafted trees will be rejected.

#### SHRUBS

Shrubs shall be of the minimum size specified in the schedules, with several stems originating from or near ground level and of reasonable bushiness, healthy, well grown, and with a good root system. Pots or containers shall be as scheduled. Plants shall not be pot bound, nor with roots deformed or restricted. Bare root material will only be accepted where specified.

#### Bulky Organic Manure/ Mushroom Compost

Bulky organic manure shall consist either of spent peat compost, mushroom compost, as described above, spent hops, or of well-rotted farm manure. Farm manure shall consist of predominantly of faecal matter and shall be free of loose, dry straw and of undigested hay. Manure shall be free of surplus liquid effluent. This shall be used on mounds only. Well spent mushroom compost shall be used in all ornamental planting areas.

#### FERTILISERS

Controlled release fertiliser N:P:K 15:9:11 plus trace elements -Osmocote plus or similar approved applied at specified rates.

Fertiliser shall be supplied in sealed bags or containers bearing the manufacturer's name, the net weight and analysis.

#### STAKES FOR EXTRA HEAVY STANDARD TREES

Stakes shall be of peeled Larch, Pine or Douglas Fir, preserved with water-borne copper-chrome-arsenic to I.S. 131, to a net dry salt retention of 5.3 kg per cubic metre of timber. Stakes shall be turned and painted one end. Size shall be 2700 x 75 mm diameter.

Set stakes vertically in the pit and drive before planting. Drive stake with a drive-all, wooden maul or cast-iron headed maul, not with a sledgehammer.

#### TREE TIES

Tree ties shall be of rubber, P.V.C. or proprietary fabric laminate composition, and shall be strong and durable enough to hold the tree securely in all weather conditions for a period of three years. They shall be flexible enough to allow proper tightening of the tie. Ties shall be min. 40 mm wide for standard trees. Provide a simple collar, free of rough or serrated edges, to prevent chafing. Provide for subsequent adjustment of the tie either by means of a buckle (nail tie to stake immediately behind it) or by leaving heads of securing nails slightly proud, to permit easy extraction and repositioning. All nails shall be galvanised.

#### PROTECTION

The interval between the lifting of stock at the nursery and planting on site is to be kept to an absolute minimum. Plants shall be protected from drying out and from damage in transport. All stock awaiting planting on site shall be stored in a sheltered place protected from wind and frost, from drying out and from pilfering. Bare rooted plants not immediately required shall be heeled-in in a prepared trench, the bundles of plants first having been opened, the plants separated and each group separately heeled-in and clearly labelled. The roots shall be covered with moist peat or soil and shall be kept moist until planted. Pots shall not be removed until plants have been carried to their planting station. Plants packed in polythene must be stored in shade.

All forest transplants and bare root shrubs shall be wrapped in polythene from the time of lifting to conserve moisture. Except when heeled-in, they shall be protected in polythene at all times until planted into their final position on site.

Plants shall be handled with care at all times, including lifting in and despatch from the nursery. Plants or bundles of plants shall not be tossed, dropped or subjected to any stress likely to break fine roots.

#### DAMAGE

Any roots damaged during lifting or transport shall be pruned to sound growth before planting. On completion of planting any broken branches shall be pruned.

#### Setting Out

Setting out shall be from figured dimensions where indicated, and otherwise by scaling.

Shrubs and ground covers planted in mass shall be at the spacing indicated on the drawings. Shrubs shall not generally be planted closer to a kerb or to the edge of a planting area than a distance equal to half the spacing indicated for that species.

#### SITE PREPARATION

Organic Manure: 50 mm deep Osmocote plus: 75 gm/m<sup>2</sup> Cultivate beds 225 mm deep, incorporating ameliorants evenly. Remove stones, rubbish over 50 mm dia.

#### EXTRA HEAVY STANDARD TREE PLANTING

Excavate tree pits to 1 cubic metres volume (.9 m diameter x .9 m deep). The base of the pit shall be broken up to a depth of 15 cm and glazed sides roughened. Remove subsoil, stones and rubbish to tip on site as directed by the Architect/Engineer. Supply and drive 2nr stakes.

For planting in areas of made up ground, load and carry topsoil from stockpile on site. In undisturbed ground, backfill with excavated material. Mix the following ameliorants evenly throughout the topsoil while it is stacked beside the pit. (Quantities are calculated for a pit of the specified dimensions):

#### ORGANIC MANURE:

0.047 cubic m (equivalent to manure 6 cm deep over 1 m dia. of tree pit).

Osmocote plus: 250 gm

Trees shall be planted at the same depth as in nursery, as indicated by the soil mark on the stem of the trees. They shall be centred in the planting pit and planting upright. The roots shall be spread to take up their normal disposition. Fit tie.

#### PLANTING OF SHRUBS AND C.G. TRANSPLANTS

Remove all plastic and non-degradable wrappings and containers before planting. Make four vertical cuts with a sharp knife on the quadrants through the edge of C.G. rootballs to sever girdling roots. Excavate hole to min. 10 cm greater diameter than the root spread, and to a depth to allow planting to same depth as in the nursery. Spread out roots of bare root species. Backfill in layers of not more than 10 cm, firming each layer and on completion.



## REPLACEMENTS

The planting will be inspected in September following planting. Any tree or shrub found to have died from any cause except as provided below or the work of other contractors shall be replaced by the contractor at his own expense. Replacement planting shall conform in all respects with this Specification, including all specified excavation, provision and incorporation of all fertilizers and ameliorants, and weed killer treatments.

Failures will not be charged to the Contractor in the following cases:

Damage by hares or rabbits, where not protected by fencing or shelters.

Failure solely due to prolonged dry weather, except in where the contractor will be responsible for watering.

Losses due to theft, vandalism or disturbance by other contractors.

Persistence of weed in planted areas will be regarded as a contributory cause of failure due to drought. Prolonged dry weather will not exonerate the Contractor if the scheduled aftercare operations have not been carried out as programmed.

## GRASSING SPECIFICATION

Seed mix 2.

## FERTILISER

10:10:20, N:P:K -supplied in bags bearing the names of the manufacturer, the analysis of the contents and the net weight. The contractor shall produce to the Landscape Architect the original delivery docket or invoice stating the quantity supplied for these works.

Weather

All work to soil shall be carried out in dry weather, and when the soil can be reduced to a friable condition, avoiding smearing or panning, and rutting and compaction by tractors.

## FINISHES

Topsoil shall stand 30 mm proud of manholes, paths and kerbs after cultivation and firming.

## FINAL GRADING

During cultivations, grade with a blade, lute or grader, to produce even, flowing surfaces, free from local humps and depressions.

## FERTILISER

During last stages of cultivation, apply fertiliser evenly over the full area of seeding in two equal passes in transverse directions, and incorporate into the seed bed up to 30 mm deep.

## FIRST CUT

Before cutting, pick off stones above the maximum diameter specified on the operations schedule. Roll if specified on the operations schedule to firm sod. The time for cutting and the height of the cut shall be as specified in the operations schedule.

## QUALITY

The quality of the grass sward shall be even throughout with a constant sward and colour. The contractor shall make good any areas not of this quality. Make up and seed over any depressions which develop after seeding. Re cultivate and re-seed any areas which fail to germinate, or which die off. MAINTENANCE SPECIFICATION

Care of Newly Planted Trees Young trees will need regular attention to ensure establishment. The most important operation is to keep the soil around the base of the tree free from weeds or grass and to ensure secure and correct staking.

## MAINTENANCE OBJECTIVE

Establish a stable and healthily growing tree with a well-shaped framework for future growth.

## MAINTENANCE OPERATIONS

a) Maintain a 1 m diameter circle of plant-free soil around the base of each isolated tree by hoeing or the use of approved herbicide other than a residual.

Allow for hoeing up of soil once every 4 weeks in the growing season (5 times per year). Allow for herbicide treatment once in the winter or spring and 3 additional treatments.

Note: In some areas this operation may be replaced by the application of bark mulch as ground cover.

b) Cut back any tall vegetation that is threatening to shade or smother the young tree (i.e. taller vegetation growing from outside the 1 m weed free area). Allow for cutting back regularly (3/4 times a year).

c) Provisional item Water the newly planted trees throughout the summer months (May to August) as required after any period of 4 weeks without significant rainfall (less than 5 mm). Apply sufficient water to thoroughly wet the top 150 mm of soil around the tree roots. This will normally require approximately 10 litres for a seedling or whip and 20 litres for a standard tree, include transport of water to the site.

- d) Check stakes and ties for firmness and support and adjust as necessary. Allow for checking twice a year, preferably in late spring and late summer.
- e) Firm the soil around the roots to ensure that the plant is securely planted in the ground and upright. Allow for firming once in the spring after planting.
- f) Formative prune to remove any dead, diseased or damaged shoots and create a balanced form for future growth. Allow for pruning once in the season after planting.

#### SHRUB BEDS GENERAL

The borders must be kept weed free, particularly of perennial weeds, to allow planting to give early cover. However, the plants may be required to be thinned so that the shrubs that are retained are able to achieve an attractive form. This may involve removing the intermediate plants soon after shoots are touching.

#### MAINTENANCE OBJECTIVE

Maintain shrub growth to cover as much as possible of the bed area and allowing the individual plants to achieve as nearly as possible their natural form. Maintain the borders free

#### OTHER ITEMS

Litter Clearance -General

Maintenance Objective

Collect and remove from the site, all extraneous litter and rubbish on a regular within landscape basis so that its presence is not detrimental to the appearance of the site. (This means that the landscape should be free from litter after each visit to site).

#### MAINTENANCE OPERATIONS

a) Collect and remove to the contractor's tip all extraneous rubbish, not arising from maintenance works, which is detrimental to the appearance of the site. This rubbish to include stones (over 50mm diameter which may be buried), bricks, debris, paper, confectionery and other wrappings, bottles, cans and plastic containers.

Allow for this operation to be carried out at regular intervals based in conjunction with other maintenance visits and operations.

#### Hard landscape Material Palette.

Paving: Shelbourne Paving 600\*400\*50mm in Silver – Street Scapes.

Kerbing : Tara exposed aggregate Kerb 915\*250\*125 Silver granite – Street Scapes

Paths: Concrete to Engineer's specification.

Car parking bays: Melifont Paving natural with Charcoal banding and line delineation.

Tree Grilles: Hartcrest tree grill and support frame. HC800/HC1000

Seating : Hartcrest HC2000

Bin storage : Hartcrest HC2055

Cycle racks : Stainless steel Hartcrest HC2085



Gabion basket seating and bin enclosures.



Trellis screening to hide bin storage areas