

PODIUM + STREET LEVEL
HARD' LANDSCAPE MATERIALS - OUTLINE SPECIFICATION KEY
 Levels, boundaries, crossings, retaining walls, paving bedding + sub-bases, geotextiles, drainage channels, gutters etc to engineer and architect's design detail and specification.

- PEDESTRIAN PAVING (PUBLIC REALM) - INSITU CONCRETE**
Footpaths in public realm surfaced with concrete paving to local authority's RMS standards and detail with kerb and haunching to engineer's design detail and specification. Saw-cut joints at max 1200m centres. 'White' coloured in-situ concrete (with Ecocom, GGBS and larger sized rounded aggregates in concrete mix) with exposed aggregate surface retarder ('Peri' by Grace Construction Products) finish and slip-form 'beveled edge' treatment to edges, all engineer's design detail and specification. Concrete with Ecocom, GGBS and local rounded aggregates. 210mm depth without reinforcement; 150mm depth with mesh to engineer's design detail and specification. All works and finishes in public realm to be agreed with local authority by means of condition or compliance.
- PAVING (PUBLIC REALM) - NATURAL STONE PERMEABLE**
Paving to be designed by consulting engineers to drain permeability in accordance with BS 7533-13:2009. CE-marked flame-textured golden-colored natural stone paving (slabs, setts and tactile warning surfaces) with a flame-textured finish and sawn all sides, min. 100mm depth to footpaths + gathering spaces. Class F Pedestrian paving (not trafficked by vehicles) to be laid on jointed with 'Sustolow' plastic spacers filled with 3mm down to dust jointing grit to free-draining bedding & sub-base to engineer's design detail and specification. Paving to cross-fall shed-drain to adjacent planter beds. Edge paving with L-shaped aluminium edging trim on C20/20 concrete bases 200x200mm. All natural stone paving to meet requirements of BS 7533-10:2021, and Parts 4 (2006), 6 (1999) and 7 (2010) of BS 7533. Stone paving to open, maintained and reinstated in accordance with BS 7533-11:2023. Stone paving to be manufactured in accordance with BS EN 1241 (Natural Stone Flag Paving) and BS EN 1242 (Natural Stone Setts). All works and finishes in public realm to be agreed with local authority by means of condition or compliance.
- PAVING (PUBLIC REALM) - NATURAL STONE BOUND**
All works and finishes in public realm to be agreed with local authority by means of condition or compliance. CE-marked golden granite paving 150mm² setts with a mix of pineapple- and flame-textured finishes, sawn 5 sides. Paving to shed-drain where possible through kerb-cut details into adjacent planter beds, to engineer's design detail and specification.
- PAVING (PUBLIC REALM) - NATURAL STONE KERBS**
250x200mm CE-marked golden granite kerbs, bull-nosed with 20mm² radius corner to exposed edge. Medium bush-hammered finish, wet in concrete haunching. Provide kerb-cuts where required to allow paving to shed-drain into adjacent planter beds. Laid to meet requirements of BS 7533-8:1999, manufactured to EN 1343. All works and finishes in public realm to be agreed with local authority by means of condition or compliance.
- PAVING (PUBLIC REALM) - ASPHALT**
All footpaths, gradients, kerbs, levels, sub-bases and bedding within the public realm to be agreed with Local Authority, CE-marked HRA-type asphalt surface, binder course (all to engineer's design detail and specification), surfacing to be certified to ISO 15.1 EN 13103 surfacing. Buff or silver-coloured pre-coated chipping aggregate to be scattered over the surface of the asphalt and rolled into it. Coloured coated chippings to have a high Polished Stone Value (PSV) and a low Aggregate Abrasion Value (AAV).
- PAVING (PERMEABLE) - HARD-BINDING OLD GRAVEL**
Permeable rolled 50mm compacted depth cream-coloured quartz sandstone aggregate gravel 'quarry dust' surfacing of locally sourced angular shaped aggregates, 10mm aggregate size down to dust. Laid to 25mm depth dolomitic limestone bedding sand to allow free drainage but seal all interstices on granular sub-base to engineer's design detail and specification. Certified pypite-free. Edge with L-shaped aluminium Permatrac edging trim on 200x200mm concrete bases, surfacing to be suitably to be comfortably trafficked with wheelchairs, mobility devices and buggies.
- PAVING (PERMEABLE) - GRASSCRETE**
Reedex by Escotel unreinforced reinforced concrete cast stone grid paving in 100mm depth 600x600mm format, with 60% of surface area 'hard' and 40% formed by openings filled with a modified topsoil mix. Lay on 40-60mm depth bed of compacted sand on levelled P4 95% compacted soil (UNE 103-501/94) on permeable sub-base and plug-plant with ground cover plants e.g. Chamomile, Mother of Thousands, etc.
- STREET FURNITURE - CYCLE SHELTERS (8 SPACES EACH)**
'No Bleed Shelter' (with 4 no. cycle stands to provide 6 no. cycle parking spaces in each shelter) by Green Roof Cycle Shelters or GKA, 3.70x2.0x2.0x2.07m. Laid on green roof substrate, planting, external wildlife panels for solitary bees and invertebrates, and bird nesting boxes. Cycle shelters with built-in locking bars and clad to the rear and sides in the public open space with mesh to ensure clear views, and in the creche cycle parking area with timber cladding to rear and to sides and with lockable doors to ensure cycling parking for staff is secure. Provide 2.00m length free circulation space to front of cycle stands.
- STREET FURNITURE - CYCLE STANDS**
'Sheffield' type cycle stands to provide short-stay visitor cycle parking (h=0.75m, overall h=1.02m (0.25m below surface), d=0.35m, Ø=0.4m, wall thickness 3mm, radius 165.9mm). Below surface flange fix with 8 no. M10 raw bolts per cycle stand on 100x100x6mm base plate, welded to post on concrete foundations to engineer's design detail and specification. Polished stainless steel. CHS. Spacing to be 1.80m length, with 2.00m free circulation space to front of stands.
- 'PLAY' BOULDERS: ROUNDED GLACIAL ERRATIC BOULDERS**
Rounded glacial erratic boulders (granite or sandstone) of variable size with either chamfered smooth edges or natural rounded shapes, depressed in the landscape finish to 0.30-0.40m depth, to achieve a 0.60m max height above the surrounding finished landscape levels to act as informal seating elements and/or bollards. Sharp edges, if any, to be deburred. Boulders of 0.75m (w) x 1.50m (l), 1.00m (h) set on sub-base to engineer's design detail and specification on well-consolidated ground.
- BOUNDARY TREATMENT A: 5-RAIL ESTATE RAILING**
Estate type railing, all steel to mild grade steel, hot-dip galvanneal and polyester powder-coated with two coats of paint to selected RAL, 'Olive Grey' RAL 7002. 'Millenary' by Irish Fencing or equivalent approved. Height: 1.20m, with 3 no. 2.00m wide and 2 no. 1.50m wide factory-assembled panels, bolted together on site. No posts to be located in tree pits.
- Railing comprises a solid panel of rails and posts + 4no. horizontal 20x6mm MSF rails and 20mm Ø solid MSF bar top rail with 8 no. 50x10mm MSF 'rod' posts, 3 no. 50x10mm 'yolner' posts, method of setting posts: 'Devil Claw' option
- Finish: hot-dipped galvanneal mild steel to EN9 ISO 1461:2009 after fabrication and subsequently electro-ethanically powder-coated with two coats as a plant
- Conformity: submit manufacturer's and installer certificates to BS 1722-8
- Foundations: posts to be erected pumph and level in concrete bases min size 350x350x50mm set in concrete base, C25A
- STREET FURNITURE - SEATS, BENCHES + PICNIC SETS**
'Drifter' seats, benches and picnic sets by Streetlife NL in standard lengths of 2.00m and 3.00m with galvanneal steel finish supports (finished with a double layer powder coating), provided with 1.8m length back-rests to 2.00m seats with a variety of L1 (300mm depth) + L2 (620mm) seat widths. Recycled 100% hardwood.
- SCULPTURE LOCATION - PUBLIC OPEN SPACE**
Graphic denotes suggested location for contemporary art sculpture at local areas throughout the proposed development.
- DRAINAGE STRIP TO BASE OF ELEVATIONS + PARAPETS**
500mm width, min. 150mm depth layer of 10-20mm diameter washed and graded pea gravel at roof penetrations, along parapets and at base of elevations. 50x100mm pressure-treated edging to separate growing media and planting. To FLL standards.
- PROPRIETARY SUDS TREE PITS (TP-01, TP-02, TP-03, TP-04)**
Street tree planting in proprietary SuDS tree pits with appropriate accessories including ventilation and irrigation pipe 3.00m. 'Pierce irrigation' silt retention around splayed rootball. Rootballs to be glued using proprietary 'ArborGlu' system. Root restricting membrane to line all sides of pits. No services runs to be laid in tree pits. Proprietary stormwater management system 'ArborFlow' by GreenBlue Urban with modular 'ReedBac' soil cells filled with 'ReedBac Hydro' and appropriate root management systems and details, or equivalent approved, 20% soil by volume, all to engineer's design detail and specification.
- TREDS + TACTILE SURFACES: NATURAL STONE**
100x150mm CE-marked golden granite tread elements, bull-nosed with 20mm radius corner to exposed edge, detailed to comply with BS 8300. Medium bush-hammered finish. Natural stone tactile hazard warning surfaces to top and bottom of flight, to comply with BS 7322. Wooden elliptical handrails on galvanized painted steel uprights, bolted through natural stone treads to concrete foundations.
- AMPHITHEATRE STEPPED SEATING: RECLAIMED TEAK OR EOA**
Sustainable sourced boards (avoid new rainforest cut wood), preferably reclaimed teak or equivalent approved including European green oak or mountain larch, to provide stepped south-facing seating elements along the edge of the courtyard podium, overlooking the amenity gardens. Surfacing to achieve min. 45 slip resistance pendulum value when measured, suitable for public access.

L0: 'SOFT' LANDSCAPE MATERIALS - OUTLINE SPECIFICATION KEY
 Refer to Planting Details, Planting Schedule and Planting Maintenance programme. 24-month long landscape maintenance and Lx-certified Defects Liability Period required post-Practical Completion. The planting stock should be sourced from a reputable supplier and be of Irish origin/provenance.

- H1 - NEW HORNBEAM CG CLIPPED HEDGEROW**
Carpinus betulus (hornbeam) 1.0x1.20m tall, potting plants, barely to base in double bagged row, with 2 planted per 500mm length. Provides 75mm depth, 1200mm width, medium-grade bark mulch topping to reduce future weed growth at base. Cut hedge to 1.20m ht after planting to ensure an even height along the hedgerow. Min. 1.20m ht sweet chestnut post, post and wire fence to protect hedge.
- H2 - NEW NATIVE MIXED SPP TRANSPARENT HEDGEROW**
Wildlife fruiting hedged species such as Hawthorn, Hazel, Elder, Bird Cherry, Blackthorn, Crataegus, Wycherley Tree, Holly, highly planted in groups of varieties that repeat themselves along the hedge, to mature as a 'natural' hedgerow. Plant in staggered rows, 4 hedging transplants per m², 1 no. climbing plant per 0.5m length (e.g. Honeysuckle, Ivy, Dog Rose). Provide 75mm depth, 1.20m width, medium-grade bark mulch topping to reduce future weed growth at base.
- DRIFTS OF BULB PLANTING**
Plug-planted with top soil 50t tonnes Crocus v.vers., Galanthus nivalis, Allium ursinum, Anemone nemorosa, Hyacinthoides non-scripta etc., variety and species depending on soil type and landscape conditions.
- PERENNIAL PLANTING TYPES: P1 P2 P3**
Moisture-tolerant perennial garden plants to planter beds with a diverse mix 70:30 ratio of ornamental grasses, bulbs, corms, ferns, ground-cover plants, sedums to flowering perennials of both native cultivars and exotic species to ensure a pollinator-friendly planting mix in line with the National Pollinator Plan. These plants should establish quickly requiring minimal maintenance.
- TREE PLANTING GENERALLY**
All tree pits to be approved by Landscape Architect prior to planting. All trees to have a 2.00m ht clear stem unless otherwise specified as multi-stemmed or feathered trees, to ensure clear visibility for pedestrians. Trees geyed underground, triple-staked or double-staked as per planting schedule & supplied with planting accessories as per Planting Details + Lx/LA Planting Details. Root barriers to be provided to all trees within 2.00m of underground services, foundations or walls. Trees planted in excavated tree pits, desired pit area approx 4.00m², 1.00m depth. No services routes to be planned through tree pits. Appropriate Plant Protection required for trees for bio-security reasons, trees to be hardened off in Ireland for 2 growing seasons.
- SEMI-MATURE TREES**
S1 Salix alba 'Babington's Avrora' 30-35cmg/1.6-6.50m ht.
S2 Salix alba 'Babington's Avrora' 30-35cmg/1.6-6.50m ht.
- SEMI-MATURE TREES**
L1 Liquidambar styraciflua 'Fastigiat', 3xtr w/rt/20-25cmg/5.0-5.5m ht.
- EXTRA HEAVY STANDARD TREES**
B1 Betula pendula 'Sapporo', 3xtr w/rt/20-25cmg/5.5-6.0m ht.
- MULTI-STEMMED TREES, LARGE SHRUBS**
A1 Amelanchier canadensis, 2xtr/wrt/2.5-3.0m ht.
B1 Betula nigra 'Heritage', 2xtr/wrt/2.5-3.0m ht.
H1 Hamamelis intermedia, 2xtr/wrt/2.0-2.5m ht.
M1 Magnolia 'Tobus', 2xtr/wrt/2.0-2.5m ht.



- LANDSCAPE - NUMBERED KEY**
- Public Footpath** 2.00m width public footpath surfaced in in-situ concrete to meet requirements of local authority specification to provide DMURS compliant pedestrian access along Firhouse Road and along Mount Carmel Park streetscape north to Dodder Valley Park; all proposed works in public realm to be agreed with Local Authority.
 - Crossover** detail at vehicular site entrance to highlight pedestrian priority over the vehicle with 'raised table' or horizontal deflection surfaced in natural stone to give pedestrians priority over vehicles
 - Cycle Parking** Secure covered cycle shelters with green roof, planting and substrate, external wildlife panels for solitary bees and invertebrates and bird nesting boxes. Cycle shelters with built-in locking bars or Sheffield-type stands, with either timber cladding or galvanised steel mesh panels to elevations, open to front.
 - Peripheral Open Space** native pollinator-friendly and shade-tolerant hedge planted along the site boundary to create a 'green corridor' to support the movement of animals through the site along the north-western boundary
 - Existing stand of trees** growing in Dodder Valley Park protected with measures identified by the consulting arborist and pruned back as per the arborist's plan
 - Creche Access path** min. 1.80m width path (internal within site boundary) to provide pedestrian access from car-park creche visitor set-down area to the creche entrance in the western elevation and from basement car-park drop-off parking to creche child drop-off
 - Secure creche amenity external open space** suitable for children's play ages 0-5, landscaped with toddler table and stools, multi-user adventure play equipment for toddlers, and elemental play equipment suitable for use by babies and toddlers
 - Gathering Space** or small piazza for residents and the locals in the public realm, provided with seating, bench and picnic set elements and feature tree planting. Focal element sculptures with sensory appeal located at each space to signal and mark them within the public realm amenity open space
 - 3.00m width public path** all-ages friendly route as desire-line through the site at the base of the building elevation, occupied with seating elements, picnic sets, interactive playful elements and sculptures. Path paved in natural stone paving
 - Arcaded colonnade** paved in natural stone paving, south-facing to overlook the public open space, providing an all-weather shelter for people, and comfortable access for all abilities using a platform lift to the podium courtyard communal amenity open space
 - Amphitheatre 'stoop'** seating between path and podium, south-facing to overlook the public open space and 3.00m width path
 - Stepped access** to the podium courtyard communal amenity open space
 - Amphitheatre 'stoop'** seating to the roof of the barbershop, to overlook the podium courtyard communal amenity open space
 - All weather pergola shelter** with power and water connections, and an external grill kitchen for resident events
 - Central feature planter** formed out of pre-cast polished concrete with exposed aggregates, provided with feature lighting, and planted with large native evergreen Scot's Pine, to recall the placename 'Firhouse'
 - Gathering space** on podium courtyard, provided with seating elements, located directly outside building entrance (stair/lift core to B-01)
 - All weather pergola shelter** with power and water connections, and a picnic set; located to enjoy direct views of the existing vegetation stand growing in Dodder Valley Park to the north-west of the podium courtyard
 - SuDS tree pits** (TP-01, TP-02, TP-03 and TP-04)

L00: LANDSCAPE LEVEL AMENITY PLAY (PUBLIC OPEN SPACE)
 Warranted and guarantee to be provided for equipment as follows: up to 8 years for support posts of boiler integrated wood; up to 10 years for support posts of larch, oak and robinia; up to 15 years for support posts of concrete and metal; 2 years for all moveable parts, metal flooring and ropes. Play equipment by Richter Spielgeräte, supplied by TimberPlay or equivalent approved. All play equipment where possible to specified as 'larch with steel feet' detail option for durability reasons in climate and context. Concrete foundations to equipment to engineer's design detail and specification. All play equipment to be tested and installed to meet requirements of EN 1176 and 1177. All safety surfacing to be tested and installed in accordance with requirements of EN 1176 and 1177.

'PLAY ALONG THE WAY' - PUBLIC OPEN SPACE
 2x (Level 9.0270m) 'Phones in Concrete' by Richter Spielgeräte to provide sensory stimulation to users of all ages and abilities. Connected by underground pipes, they allow people to communicate over distances. The Phones are an attractive play item which confront people with the physical phenomena of sound waves and sound wave transmission during play. Children are fascinated when they can actually hear the voice of their play partner clearly at a distance of approximately 15.00m. This telephone can also be incorporated in role play and becomes particularly interesting when bushes or trees obscure the view to give an illusion of a 'long distance' telephone.

'PLAY ALONG THE WAY' - PUBLIC OPEN SPACE
 10x1520x Tuning Stone, w=2.3m, h=1.50m by Richter Spielgeräte to provide sensory stimulation to users of all ages and abilities. Here we have used the granite Tuning Stone as a tactile, interactive playful sculpture and way-marker in the landscape. Two possibilities exist of bringing the large mass of the Tuning Stone into motion: first, it can be achieved by means of extreme effort over a short period of time. The second possibility however is amazing: merely by exerting a slight force it is possible to set the massive stone block into a rotating movement which becomes faster and faster, provided that the stone continues to be pushed long enough. This can even be achieved merely by using your little finger.

'PLAY ALONG THE WAY' - PUBLIC OPEN SPACE
 4x (2 plant 1000mm 'Confederate' by Richter Spielgeräte) to provide sensory stimulation to users of all ages and abilities. 140cm ht stainless steel pillars with cone-shaped openings, connected by underground pipes. Sound behaves in a similar way to water which is why it can be directed through tubes as was done in old ship's telephones. Between two and four speaking/listening stations can be installed and these are connected by underground pipes and a special sound pleasant when a friendly co-player sets the swing into motion from outside. It is special if there are several children in the hammock. Moreover, it is suitable for inter-generational adventures.

'PLAY ALONG THE WAY' - PUBLIC OPEN SPACE
 10x1000mm 'Hammock' by Richter Spielgeräte to provide gentle sensory stimulation to users of all ages and abilities. Here we have located a gently-swinging hammock near the gathering space outside the cafe to encourage people to sit for a while. This version has been specified with larch posts on steel feet for durability, and natural coloured ropes.

'PLAY ALONG THE WAY' - PUBLIC OPEN SPACE: IMPACT ATTENUATING SURFACING
 To Fall from area of hammock swing, provide 25mm thick rubber grass matting surfacing in 1.50x1.00m sizes, fully tested with Critical Fall Height up to 2.00m to BS EN ISO 1177:2008, BS EN 1188:1998 for slip resistance and to BS EN 4790:1987 for ease of access. 80% recycled rubber content, surfacing to comply with the Disability Discrimination Act, and to be free-draining to provide a secure footing when wet. UV resistant material. Supply with 4 no. plastic joining pegs and 8 no. joining ties per mat. Seals with amenity pet-friendly ground cover mix.

PLAY AREA (PERMEABLE) - BARK LIASS
 Well-graded, chunky pine bark loose impact attenuating safety surfacing. Dust and fines removed. Nominal particle size 30-60mm, e.g. '10050' play bark by Melcourt or equivalent approved, tested and certified in accordance with EN 1176/1177 to 3.00m CPl to 500mm settled depth on free-draining sub-base and geotextile to engineer's design detail and specification.

ISSUE STATUS:
 PLANNING REF: P
 REVISION: 1
 DRAWING NO: 21_477-04-002
 1ST ISSUE: 2021-01-12
 DATE ISSUED: 2022-05-27
 PROJECT NO: 21_477
 SCALE: 1:200
 SHEET NO: 04
 NORTH
 DRAWN BY: JC
 CHECKED BY: JC
 DATE: 2022-05-27
 PROJECT ARCHITECTS: OMP ARCHITECTS

Open Space Area Schedule

Name	Level	Area
CRECHE PLAY SPACE	B1	216.3 m ²
PUBLIC OPEN SPACE	B1	53.9 m ²
PERIPHERAL AREA	B1	29 m ²
PERIPHERAL AREA	B1	11.3 m ²
PUBLIC OPEN SPACE	G2	1293.5 m ²
PERIPHERAL AREA	G2	218.3 m ²
PRIVATE COMMUNAL AMENITY SPACE	O1	467.6 m ²
PRIVATE COMMUNAL AMENITY SPACE	O2	30.9 m ²
PRIVATE COMMUNAL AMENITY SPACE	O3	168.5 m ²
PRIVATE COMMUNAL AMENITY SPACE	O4	295.9 m ²

Public Open Space % of Site Area Schedule

Name	Area	Percentage of Site Area
PUBLIC OPEN SPACE	1347.4 m ²	29.3
TOTAL SITE AREA	4605.6 m ²	100

Quantum Open Space Areas

- CRECHE PLAY SPACE
- PERIPHERAL AREA
- PRIVATE COMMUNAL AMENITY SPACE
- PUBLIC OPEN SPACE

GENERAL NOTES

- For details of existing ecology, please refer to ecologist's and botanist's reports if available.
- For details of existing vegetation and vegetation to be removed and retained, please refer to arborist's reports if available.
- For details of signposts and services, please refer to consulting civil, lighting, mechanical and electrical engineer's drawings and reports.
- Indicative-only layout of existing and proposed utilities shown to illustrate existing water mains, underground and overground services, drainage and ancillary infrastructure, as they relate to landscape. For details of same, please refer to consulting engineer's design, detail and specifications.
- All materials to be agreed with local authority by way of compliance.
- This drawing is to be read in conjunction with all relevant architect, engineer and other specialist's drawings and specifications.
- All levels are in metres and relate to Mean High Water/Oceanance Data.
- The site layout is based on the topographical site survey.
- For details of finished building and site levels, approaches to buildings such as sloped or level access, ramps or steps, and retaining walls, please refer to architect's consulting engineer's design detail and specification.
- All drawings have not been prepared to indicate compliance with DAC, BCAR or Disability Access Act.
- All paving bedding, site-specific sub-bases, build-ups, joints, footings, foundations, joint detailing, reinforcing bar details and bolts to illustrate existing water mains, underground and overground services, drainage and ancillary infrastructure, as they relate to landscape. For details of same, please refer to consulting engineer's design, detail and specifications.
- All services access covers to be located 100% in one finish or the other.
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