

**GREEN INFRASTRUCTURE PLAN - NUMBERED LEGEND**

Positive measures the design team has undertaken at FI stage to respond to the issues raised by the local authority in relation to GI include the following:

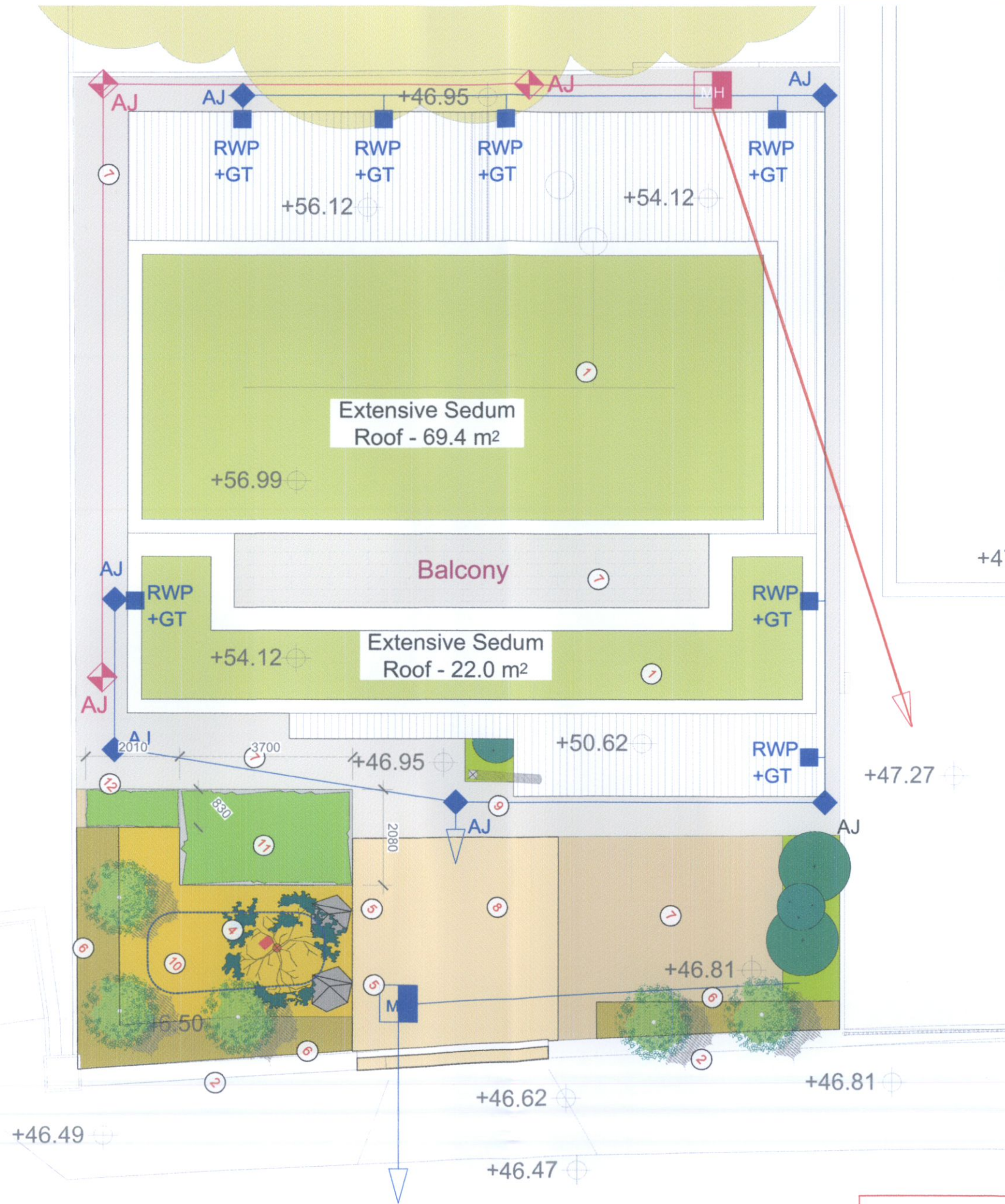
- extensive-type sedum green roofs in areas of the development roofs not subject to shade (i.e. not north-facing) with gravel perimeter trims
- retention of existing old limestone walls (coursed, random rubble) along the street-frontage
- integration of bat-boxes and swift boxes into the walls of the proposed building
- a bird/bat box hung from the focal element tree in the rain garden
- rounded granite erratic boulders selected with a small 'dish' in the surface to collect rainwater and act as a bird-bath. Frogs and other small amphibians like to rest on warm stones
- planting of boundary hedges that retain leaf cover during the winter (Hornbeam) to preserve shelter habitat for wildlife during the cold months
- permeable paving generally (flexible construction)
- salvaged stone setts (bound construction) in vehicle manoeuvring areas (circular economy principle)
- The specification of a post-type luminaire to minimise light pollution, spillage, glare or the emission of light above a horizontal plane
- a small rain garden planter bed with appropriate moisture tolerant plants
- semi-intensive bio-diverse green-roofed cycle shelter with wildlife and habitat panels, flowers in bloom from April to November and early spring bulbs, dried and rotting logs. Cycle structure made from primarily reclaimed, re-used or recycled materials, with habitat panels made from a mix of found materials for invertebrate nesting and over-wintering and growing substrates made from recycled secondary waste with a low nutrient level. Timber cladding is FSC-certified new European softwood. Plants and plugs are certified by FloraLocale.
- semi-intensive green roofed aluminium frame 3-bin shelter with integrated FSC larch posts and climbing plant wires.

**EXISTING TREES, LANDSCAPE MITIGATION & PLANTING RATIONALE**

7 no. existing trees (all of which are proposed to be felled because of the impacts of the development) were observed on site by the consulting arborist. All 7 are Category C, meaning trees of low quality. Existing tree species noted on site by the arborist include Juniper, Lawson Cypress, Ash, Apple and Cherry. The proposed landscape plan illustrates 5 no. proposed feathered/clear-stemmed trees with 4 no. multi-stemmed trees (9 in total) as mitigation planting for the 7 no. felled trees.

Generally the planting palette rationale has been to concentrate on the planting of pollinator-friendly trees min. 18-20cm in size and decorative multi-stemmed trees, all to have been grown in an Irish nursery. The trees specified have been chosen for their climate-resilient properties, such as a native moisture-tolerant conifer in a rain garden (*Pinus sylvestris* spp) and pollinator-friendly *Betula nigra*, which is chosen for its resilience in an expected 2° temperature increase by 2050.

Similarly planting stock for container-grown plants and bulbs in amenity planter beds has been specified as pollinator-friendly, low-maintenance plants, which should establish easily and help absorb cloud-burst rain events, detaining and absorbing water on site. All stock must be Irish nursery-grown pollinator-friendly plants.



**GREEN INFRASTRUCTURE PLAN**  
Landscape and GI measures by the design team taken to protect, enhance and restore green infrastructure and biodiversity at the site; outline description of 'soft' landscape measures and planting

	<b>BIRDBAT NESTING BOX:</b> wood/concrete bird nesting box 'Nest Box 2GR' galvanneal steel hanger by Schwegler, with three hole 27mm Ø entrances to support Blue, Marsh, Great and Crested Tits. Due to the small size of the entrance hole no other species can occupy it. An additional recess for Bats has been created inside.
	<b>BOULDERS: ROUNDED GLACIAL ERRATIC BOULDERS:</b> 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 extant, to be deburred. Boulders of 0.75m (w) 1.50m (l), 1.00m (ht) set on sub-base to engineer's design detail and specification on well-consolidated ground.
	<b>DRIFTS OF BULB PLANTING</b> plug-planted with top size 5/6 bulbs 50% indigenous <i>Crocus</i> vars., <i>Galanthus nivalis</i> , <i>Allium ursinum</i> , <i>Anemone nemorosa</i> , <i>Hyacinthoides non-scripta</i> and 50% exotic species bulbs selected for pollinator-friendly characteristics.
	<b>PERENNIAL PLANTING TYPES + MIXES:</b> Moisture-tolerant perennial pollinator-friendly container-grown 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 minimised maintenance.
	<b>EXTRA-HEAVY STANDARD TREES</b> <i>Td</i> <i>Pinus sylvestris</i> 'Shawnee Brave' (Swamp Cypress) for rain-garden 4xtr/wrb/30-35cmg/5.00-6.00m ht.
	<b>HEAVY STANDARD TREES</b> <i>Bn</i> (River Birch) <i>Betula nigra</i> 'Heritage' 4xtr 25-30cmg, 2.50m ht. clear-stem
	<b>MULTI-STEMMED TREES, LARGE SHRUBS</b> <i>Al</i> <i>Amelanchier canadensis</i> , 2xtr/wrb/2.50-3.00m ht. <i>Bn</i> <i>Betula nigra</i> 'Heritage', 2xtr/wrb/2.50-3.00m ht. <i>Hi</i> <i>Hamamelis intermedia</i> 'Jelena', 2xtr/wrb/2.00-2.50m ht. <i>Au</i> <i>Arbutus unedo</i> , 2xtr/wrb/2.00-2.50m ht.
	<b>PAVING: PERMEABLE PEDESTRIAN PAVING:</b> A-rated in accordance with Green Guide Specification Edition 4, A+ rated when used with a prepared recycled sub-base. Permeable sub-base and bedding layer to be flexible, SUDSFlow spacers
	<b>PAVING: PERMEABLE GOLDEN GRAVEL:</b> recycled permeable sub-base and bedding layer, plastic honeycomb retaining grid can be made of recycled plastic.
	<b>PAVING: BOUND NATURAL STONE SETTS:</b> using a durable recycled material such as natural stone setts reinforces circular economy principles; this area must be 'bound' construction to withstand wear and tear of manoeuvring vehicles. Area can 'sheet-drain' into adjacent planter bed and permeable paving construction, and drain via channel drain at site entrance into rain-garden
	<b>EXTENSIVE TYPE SEDUM GREEN ROOF:</b> FLL and GRO certified green roof, with 3-0-40mm depth pre-grown mature sedum blanket (min. 17 different types of sedum) on 80mm depth lightweight low-nutrient recycled substrate, on drainage layer. Test to BS 8616 and provide mains water tap connection for occasional maintenance in times of drought, and ensure safe access for same.
	<b>RAIN-GARDEN PLANTER BEDS</b> Blue dashed line indicates extent of 200mm depth 'free-board' areas to planter beds designated as 'rain-gardens'. Provide 50mm depth non-organic mulch to top planter, 600mm depth rain garden/bio-retention filter media/topsoil e.g. 'Bioretention Soils' by Enrich.ie; min. 100mm depth filter layer of pea gravel on geotextile; and 500mm depth of drainage layer/sub-soil (min. 100mm depth in areas where excavations are limited). Detail design by consulting civils engineers to all drainage elements.
	<b>H1 - NEW HORNBEAM CONTAINER-GROWN HEDGEROW</b> <i>Carpinus betulus</i> (Hornbeam), a naturalised plant in Ireland, keeps its leaf cover year-round, turning from a fresh green in spring to a deep golden yellow in winter months. Keeping its leaf cover means it can maintain a screen-like character and act as year-round habitat for wildlife.

**GREEN INFRASTRUCTURE PLAN - PROTECTION, ENHANCEMENT & RESTORATION SCALE 1:100@A3**

**Additional Information**  
Planning Ref: SD22A/0372  
February 2023



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<b>PROJECT</b> PROPOSED MIXED-USE DEVELOPMENT, ST. CLAIRE'S, LUCAN ROAD	<b>PROJECT ARCHITECTS</b> GAP ARCHITECTURE & DESIGN
<b>CLIENT</b> JOHN SHENTON & MARGARET HANLON	<b>PLANNING PERMISSION REF</b> SD22A/0372 SDCC
<b>JOB NO.</b> 23_229	
<b>DRAWING</b> GREEN INFRASTRUCTURE PLAN (PROTECTION, ENHANCEMENT & RESTORATION PROPOSALS)	
<b>DRAWING NO.</b> 23_229-PDF1-04	<b>FIRST ISSUED:</b> 2023-02-09
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<b>STATUS:</b> PLANNING	<b>SCALE:</b> 1:100 @ A3
	<b>REVISION</b> B

NOTES:  
All dimensions are in millimeters unless otherwise stated and shall be checked and confirmed by the contractor on site. Any discrepancies shall be immediately reported to the landscape architects. Work to figured dimensions only - Do not scale from drawing. Not for Construction Purposes unless specifically marked.  
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