Landscape Proposals For Discharge of Planning Conditions - 13 April 2015

The purpose of this report is to provide further details and information on the landscape design as set out in the following planning conditions:

- Condition 6 Hard & Soft Landscaping
- Condition 21 Living Roofs

The approach has been to update the original landscape report submitted for planning with additional information as set out in the above planning conditions.

Grays Inn Road

Grays Inn Road

1 Granite paving blocks - Mid/Warm Greys

2 Main Entrances - Sandstone Paving - Buff

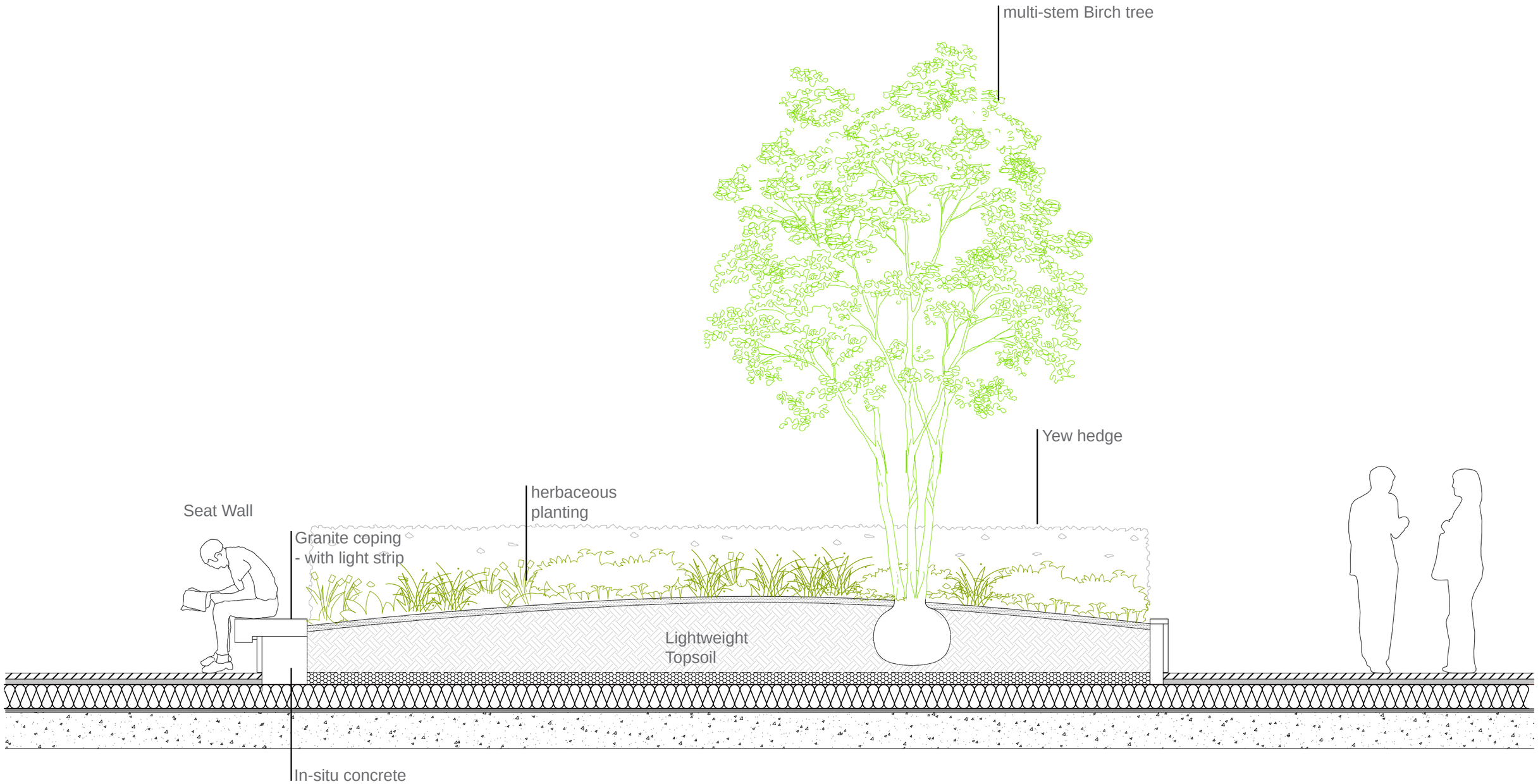
3 Art Gallery/Cafe - Granite Paving Flags

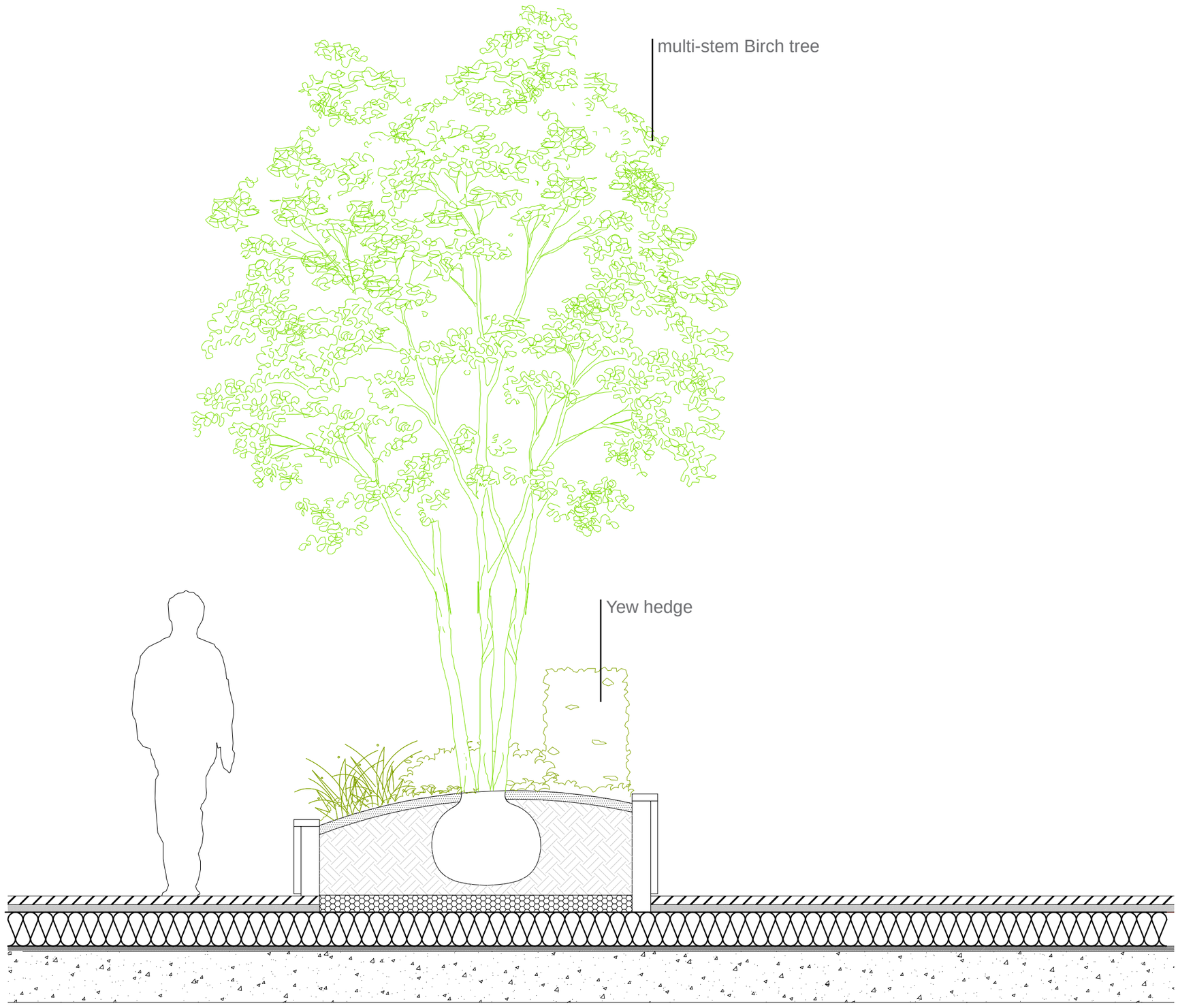
4 Entrances to Terraces - Dutch Brick Paving

5 Play surfacing

Ground Floor - Hard Materials

TYRÉNS UK


multi-stem Birch tree
Yew hedge
herbaceous planting
Seat Wall
Granite coping
- with light strip
Lightweight Topsoil
In-situ concrete

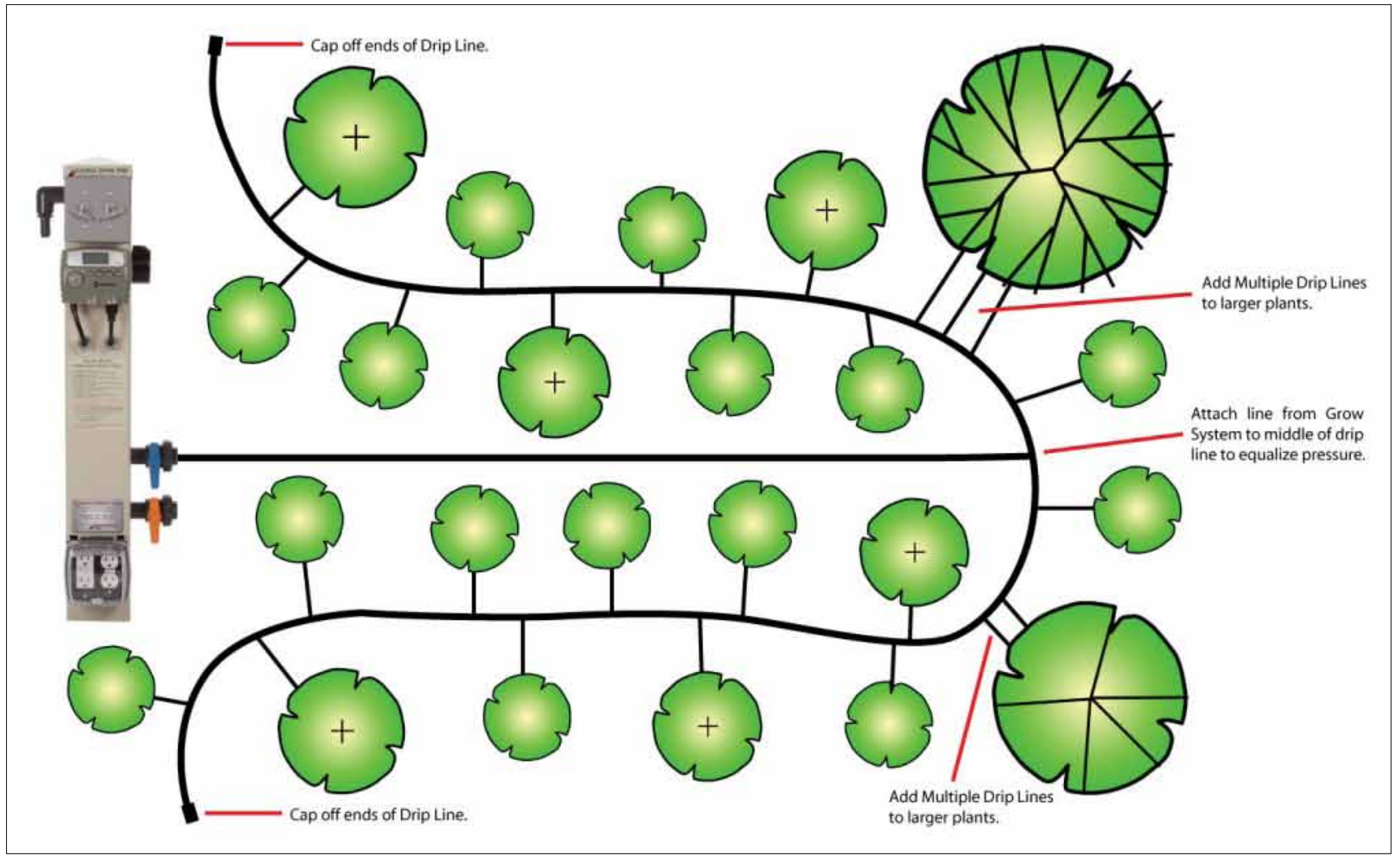

multi-stem Birch tree
Yew hedge

Planter Irrigation

Due to the raised planters being on podium (over the basement sections of the scheme), the planters require artificial irrigation.

We are proposing to use a drip irrigation system, allowing water to drip slowly to the roots of plants via a 16mm diameter drip line with drippers positioned every 300mm. The drip line is installed on the surface and evenly spaced for optimised watering; this pipe will be covered using bark or mulch for aesthetic proposes. The system will be commissioned through a commercial irrigation company, and would typically be computer-controlled from the Concierge. The planters have a drainage layer/ water reservoir at the base, providing drainage as well as additional water through capillary action.

There is also the opportunity to re-use captured stormwater runoff as part of the sustainable urban drainage proposals; this will be further developed as the detailed design of the scheme progresses. Drip line irrigation has been officially approved for use during hosepipe bans since the hosepipe ban in 2012.



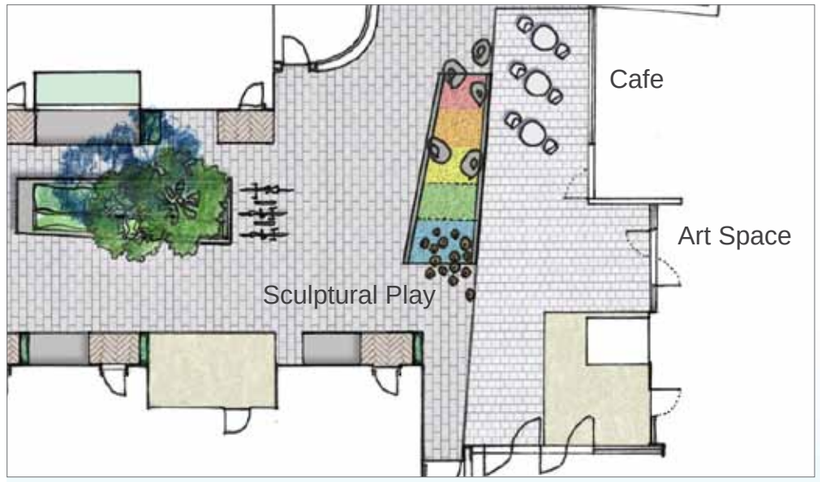
Typical diagram for drip line

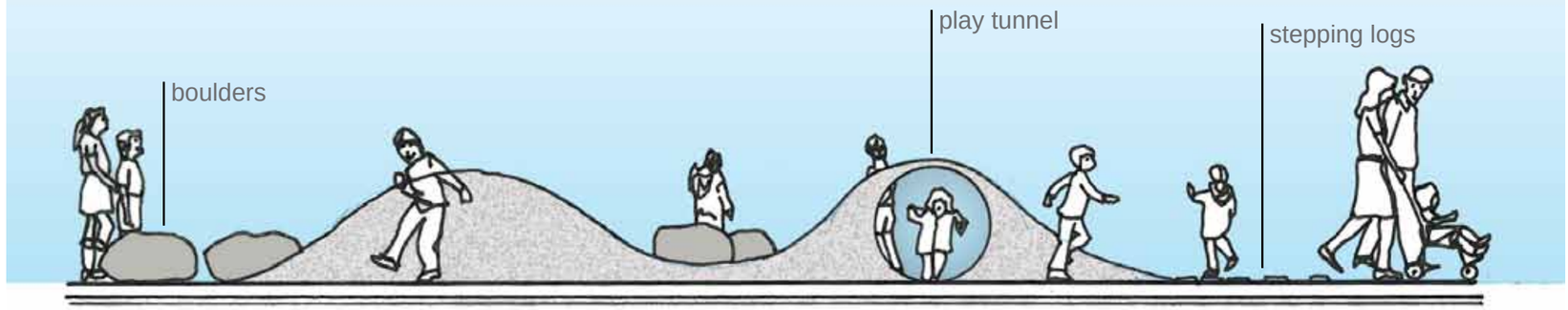
Grays Inn Road

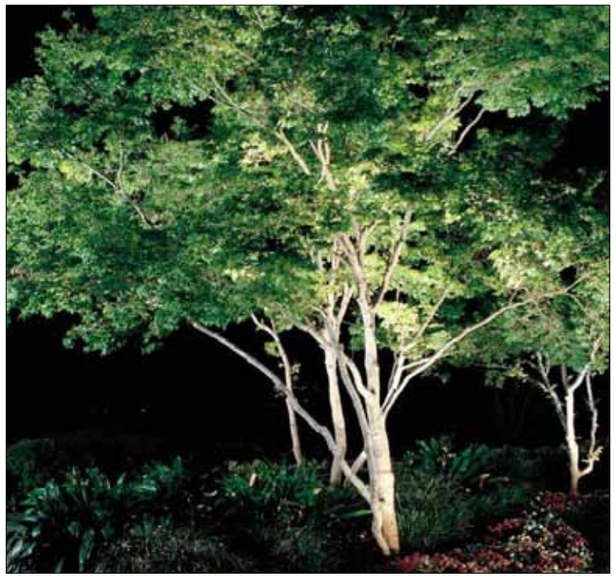
Play Provision

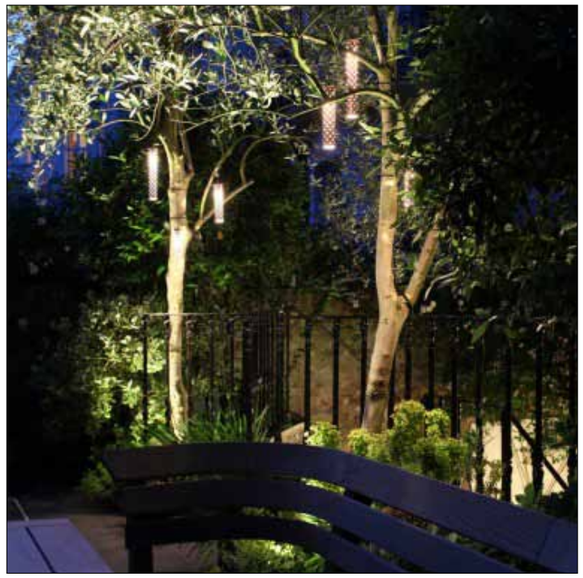
We have developed a simple strategy of providing an undulating surface (recycled rubber crumb in a range of primary colours) contained by curving low walls, which provides opportunities for ‘Movement’ (running, jumping, climbing, balancing, rolling).

The undulating mounded area will incorporate boulders, timber stepping stones, and a tunnel to provide a ‘natural play’ character, rather than the use of traditional play equipment which would be inappropriate in this urban and narrow location.









Uplighters to the trees

Integral lighting strips to the raised planters

Lighting types

The lighting is functional, providing safe movement through the development.

Key lighting types are:

1. Light columns (3 or 4 metre high columns - to be confirmed) with four separate LED directional fittings; with anti-glare louvres and asymmetrical refractors; the fittings allow controlled light, stopping light spill into the units whilst giving enough light for facial recognition for CCTV

2. Integral lighting strips to the raised planters/seating edges - low-level lighting to highlight these features

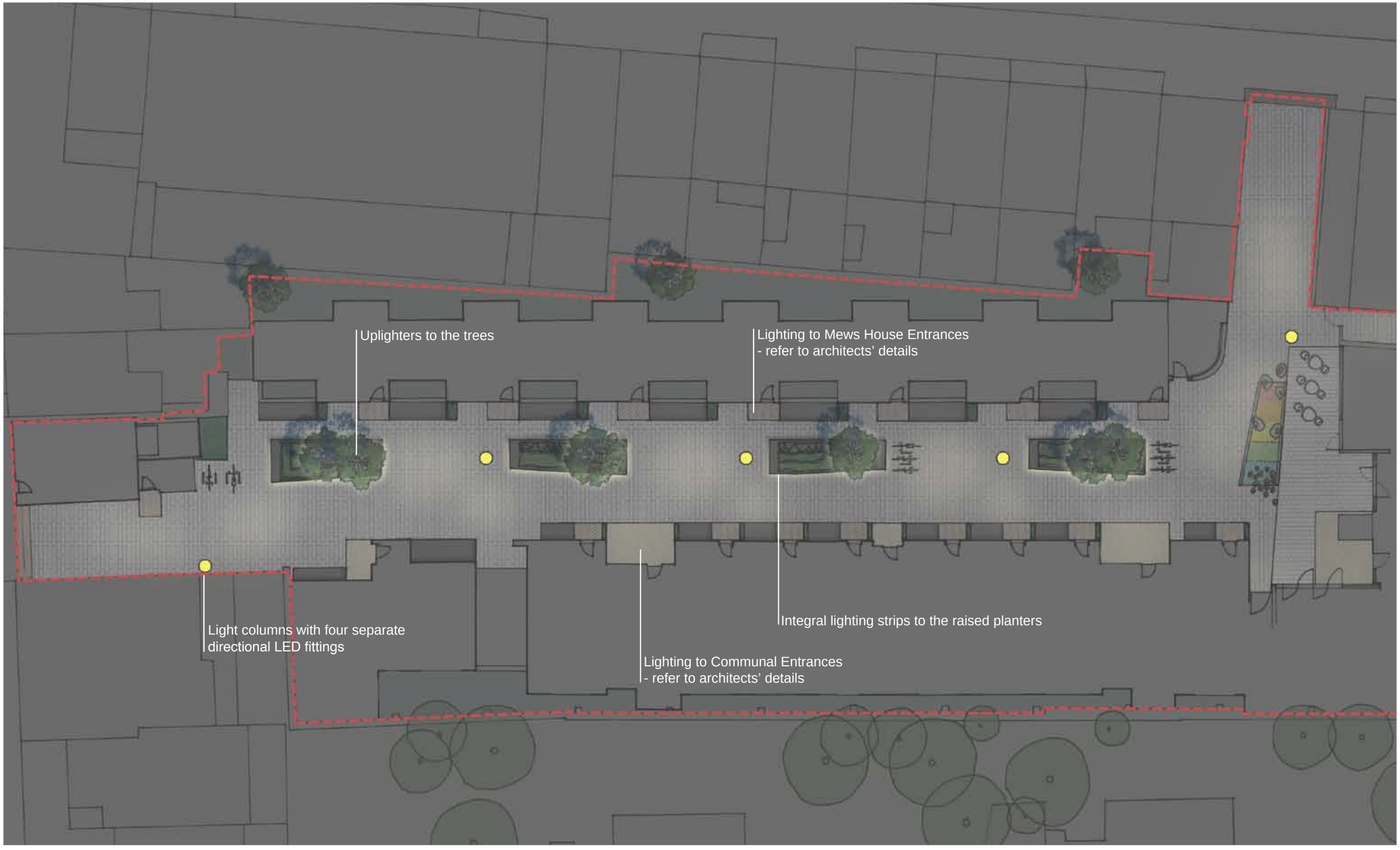
3. Uplighting to the trees - as a highlight feature (to be on a timer system).

The lighting is to be programmable, with control located in the concierge facilities.

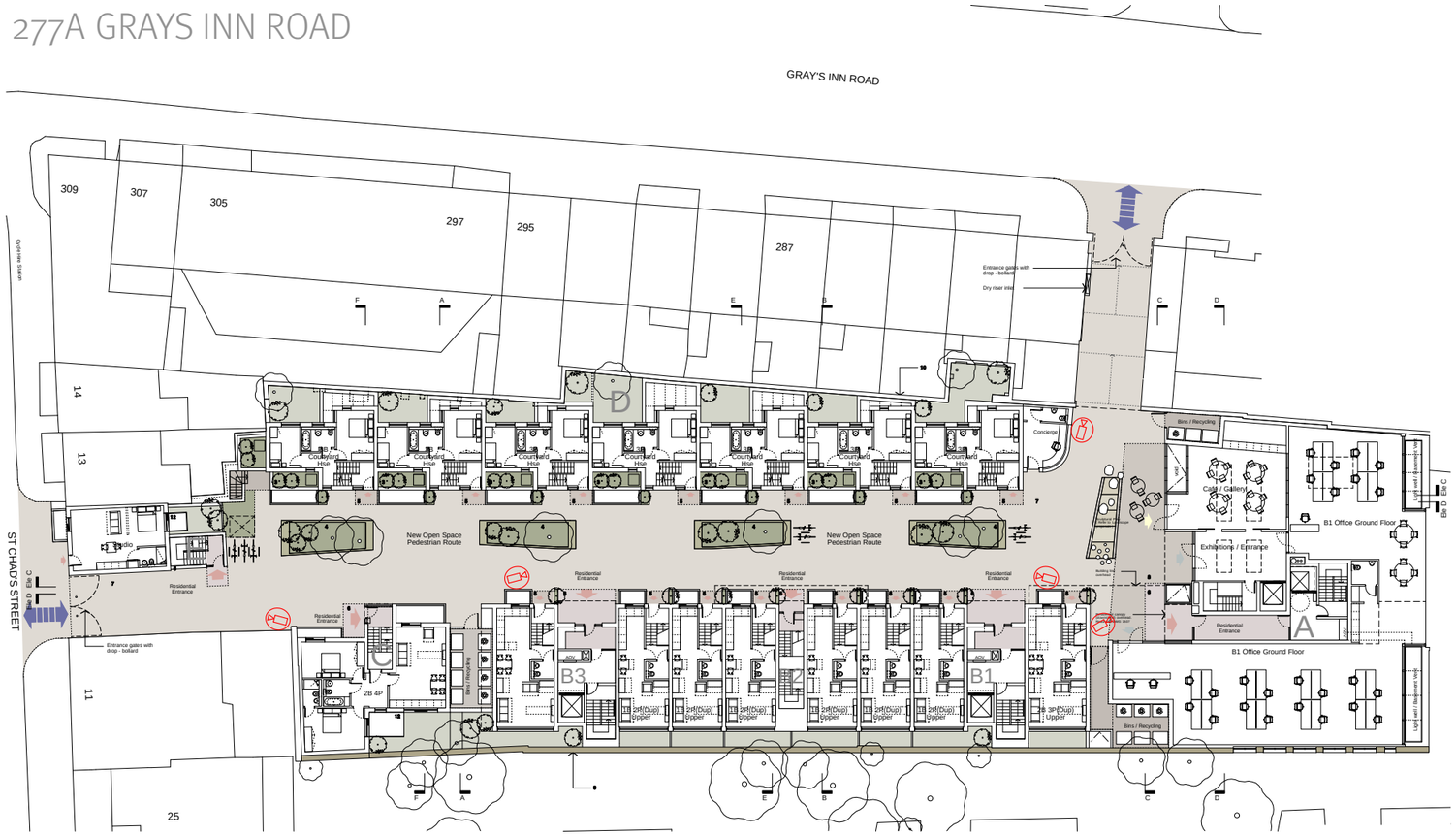
The external lighting complements wall and soffit-mounted light fittings to the building entrances, and soffit/wall-mounted lighting to the entrance from Gray's Inn Road.

Light columns with four separate directional LED fittings

Grays Inn Road



277A GRAYS INN ROAD



DO NOT SCALE

BACKGROUND DRAWING INFORMATION

FILE NAME	ORIGINATOR NAME	DESCRIPTION NAME	REV	DATE RECD
126-1201A	MATERIAL ARCHITECTS	PROPOSED PLAN GROUND FLOOR		OCT '14

Notes

THIS DRAWING IS NOT TO BE USED FOR CONSTRUCTION PURPOSES. DO NOT SCALE OFF THIS DRAWING. ALWAYS WORK TO NOTED DIMENSIONS. ALL DIMENSIONS MUST BE VERIFIED ON SITE BEFORE COMPLETING SHOP DRAWINGS OR SETTING OUT THE WORK. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH THE TECHNICAL SPECIFICATIONS AND ASSOCIATED EQUIPMENT SCHEDULES AS PREPARED BY XCO2 ENERGY Ltd. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL ARCHITECTURAL CIVIL AND STRUCTURAL ENGINEERS' DRAWINGS AND ASSOCIATED XCO2 ENERGY Ltd. DRAWINGS.

Rev	Date	Description	Chk'd	Appr
P1	15/01/15	PRELIMINARY	TG	SS

PRELIMINARY

Client: REGAL HOMES

Architect: WAUGH THISTLETON ARCHITECTS LTD

Project: GRAYS INN ROAD

Title: CCTV LOCATION PLAN

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Scale@A1	Drawn	Checked	Date
1:50	YE	TG	15.01.15

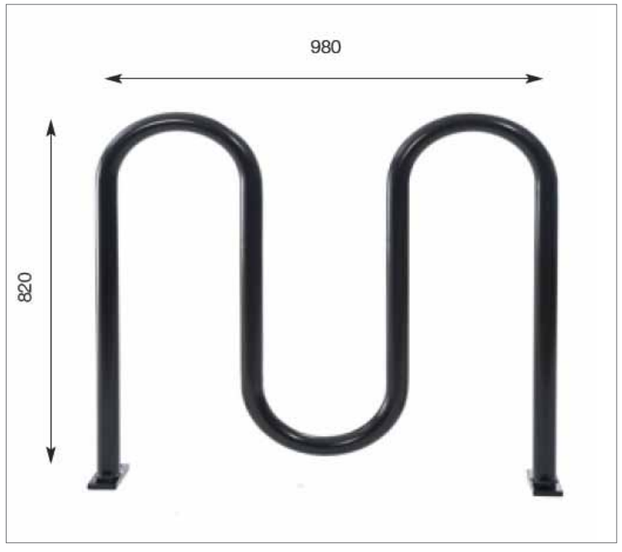
Drawing Number: 8465-SK-E-001

Revision: 00

Grays Inn Road

Visitor Cycle Parking

Camden M Cycle Stand

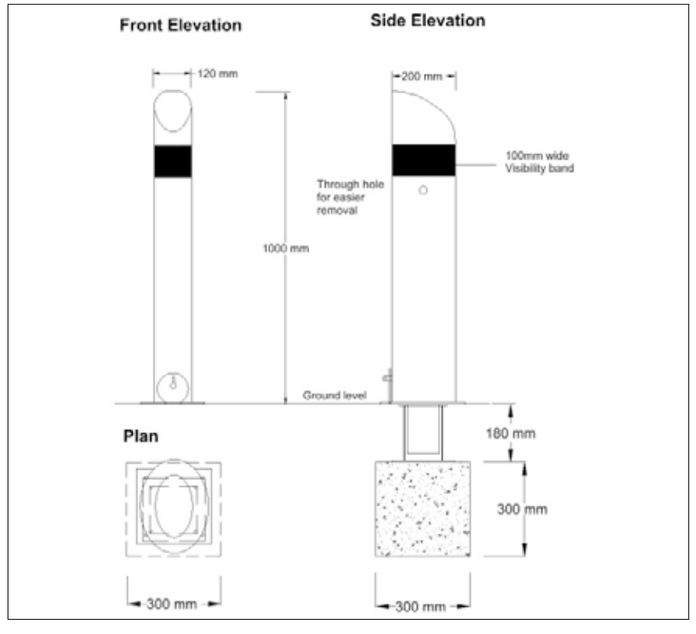


Collapsible Bollards

The entrances to both St Chad's Street and Grays Inn Road have collapsible bollards, to control vehicular access whilst allowing emergency and servicing vehicles.

The bollard shown is the Tb20 Bollard by VOSS Street Furniture. The Tb20 features a unique oval section and profiled top; the finish is stainless steel 304 grade. The bollards will have a visibility banding.

The bollard can be removed, and sits within a sunken socket; the hinged cover flap is brought over the flange on the bollard for securing with a padlock. The removal of the bollards for servicing, emergency access, etc. will be controlled by the Concierge, as part of the management of the development.



Grays Inn Road

Trees

Appropriately-sized mature trees are a positive addition to the main open Space.

We are showing 6 trees in this space, providing a level of visual screening between residential units; the species are chosen to grow in restricted spaces and are tolerant of urban conditions; rooting zone to be restricted with root barriers.

Tree species proposed have light-coloured leaves and are medium-sized trees with a narrow crown; each has yellow Autumn foliage and are tolerant of urban conditions (including pollution). The species are:

Birch	Betula utilis var Jacquemontii
Maidenhair Tree	Ginkgo biloba ‘Lakeview’

Himalayan Birch *Betula utilis* var Jacquemontii - multistem

Maidenhair Tree *Ginkgo biloba* ‘Lakeview’

Grays Inn Road

The planting has a ‘naturalistic’ character, with a range of perennial plants, with some hedges of Yew and Box used as structure and a level of screening between the residential buildings.

We have illustrated the range of some of the ‘naturalistic’ plant species being considered for the development.

The key planting characteristics are:

- Low-maintenance requirements
- Low-water demand/drought-tolerant
- Shade-tolerant
- Evergreens/perennials - providing screening and ‘greening’ throughout the year
- Plants with interest at different times of the year (flower colour in Spring/Summer; Autumn leaf colour; bark/stem colour in Winter; scent)
- Native species where appropriate, including Herbaceous Perennials, to increase the nature conservation value of the project

Yew hedges - *Taxus baccata*

Box - *Buxus sempervirens* ‘Suffruticosa’

Cyrtomium fortunei

Pennisetum alopecuroides

Hellebores *Helleborus* x *hybrida*

Echinacea purpurea

Sedum telephium

Salvia nemerosa

Iris foetidissima

Feather Grass - *Stipa tenuissima*

Polystichum setiferum

Liriope muscari

Grays Inn Road

Black Bamboo - *Phyllostachys nigra*

Raised planter with bamboo

Roof Terraces - raised planters and timber decking

Extensive Green Roofs - Wildflowers/Biodiverse Roof

Sedum Roof

Grays Inn Road

A number of roof areas are directly connected to the internal spaces; these will have an area of paving (flush with the internal finished floor level) and integral raised planters to the roofspace boundary with a range of appropriate small tree, shrub and groundcover species. Drainage and irrigation will be incorporated.

Grays Inn Road

The Biodiverse Roof will comprise mounded substrate/growing medium between 80mm-150mm depth and will be supplemented with a wildflower seed mix to aid natural colonization. Biodiversity features such as deadwood logs will be included to enhance the biodiversity value (Refer to Environ report for further details).

The substrates proposed will be a range of recycled crushed materials, including crushed brick, crushed aircrete and sharp sand.

To facilitate rapid establishment and promote a more predictable mix of species of biodiversity benefit the decision has been taken to supplement the biodiverse roofs for the with specially chosen wildflower species. The species mix has been carefully chosen to optimise biodiversity across the roof spaces, to suit the substrate utilised, and importantly, to tolerate the drought and wind exposed conditions prevalent at the different roof levels.

A full list of species are included in Table 1.1 on the following pages. The proposed species are commonly found on industrial, wasteland and brownfield sites in this area.

Biodiverse Roof

Agrimony

Cornflower

Common Poppy

Bladder Campion

Table 1.1 **Wildflower Species Mix with Characteristics**

Species Name	Latin Name	Height	Wildlife Benefit	Growth Conditions
Agrimony	*Agrimonia eupatoria*	Up to 65cm	The food plants by the larvae of some Lepidoptera species including Grizzled Skipper and Large Grizzled Skipper	A hardy plant that prefers partial shade
Autumn Hawkbit	*Leontodon autumnalis*	15-30cm	Late flowering, attracts beetles and butterflies	Drought tolerant, low nutrients, wind tolerant, open conditions
Birds Foot Trefoil	*Lotus corniculatus* (do not confuse with introduced sown variety *L. Corniculatus* var *sativus)*	20-40cm	Mid flowering, good nectar source for many insects and a larval source for many species of Lepidoptera - beneficial for black redstarts	Drought and wind tolerant, low growing, sprawling habit. Common on grasslands and along roadsides. A member of the legume family therefore nitrogen fixing and will increase the nutrient value of the substrate over time
Biting Stonecrop	*Sedum acre*	10-15cm	Branched clusters of bright yellow flowers, which have long protruding stamens and are attractive to bees for pollen and nectar.	This is a spreading plant that thrives on virtually soil-less conditions. Favours full sunlight.
Black Medick	*Medicago lupulina*	Up to 50cm	Early flowering, attracts butterflies, hoverflies and bees. Beneficial for black redstarts	Low growing, ground hugging plants. Very common on roads and roadsides and is drought and wind tolerant, and can survive relatively cold conditions. A member of the legume family therefore nitrogen fixing and will increase the nutrient value of the substrate over time
Bladder Campion	*Silene vulgaris*	40-80cm	The Bladder Campion is an important nectar source for butterflies and a favourite food plant of frog hoppers, the insects which create cuckoo spittle	It prefers neutral, dry soils and is generally found alongside paths and in open grassy or rough ground.
Breckland Thyme	*Thymus serpyllum*	5-20cm	Flowers are attractive to bees	Easily grown in average, dry to medium, well-drained soils in full sun. Tolerates drought and poor soils of low fertility. Loose, sandy or rocky soils with excellent drainage are best habitat
Bugle	*Ajuga reptans*	10-25cm	The flower is an important early source of nectar for butterflies, especially the Duke of Burgundy, Marsh Fritillary and the Pearl-Bordered Fritillary.	A small, spreading plant that produces a ring of blue flowers on top of each set of leaves. Prefers sunny of semi-shaded conditions
Bulbous Buttercup	*Ranunculus bulbosus*	20-50cm	The food plant of the larvae of some Lepidoptera species including Hebrew Character and Small Angle Shades	Favours nutrient-poor, well-drained soils
Common Corncockle	*Agrostemma githago*	Up to 80cm	Attracts lady-beetles and parasitic wasps	Hardy plant found in many conditions. Likes disturbed, nutrient poor soils
Common Field Speedwell	*Veronica persica*	10-30cm	Flowers most of the year, attracts butterflies.	Low growing, hardy plant, nutrient rich
Common Forget-Me-Not	*Myosotis arvensis*	10-35cm	Food plant of the larvae of some Lepidoptera species including *Setaceous Hebrew Character*	Shows a preference for soils with low pH
Common Mouse Ear	*Cerastium fontanum*	Up to 50cm	Early to late flowering, flowers are self or insect pollinating	Low growing, likes dry grassland and wasteland conditions, prefers richer nutrient levels
Common Poppy	*Papaver rhoeas*	Up to 60cm	Has no nectar but the flowers provide pollen for bees. Beetles feed in the seed capsules and some species may overwinter here when the capsules are empty	Hardy plant grows on disturbed soils