



LANDSCAPE PLAN



Existing Tree Schedule

| No | Species | Girth | Ult. Height | Ult. Spread | Life expectancy |
|----|----------------|----------------|-------------|-------------|-----------------|
| 1 | Sycamore | multi stemmed | 19m | 12m | >40 years |
| 3 | Elder | multi stemmed | 4m | 5m | 10-20 years |
| 1 | Tree of Heaven | single stemmed | 8m | 5m | >40 years |



Specimen Climber Schedule





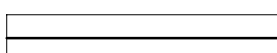
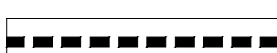
| No | Species | No/m ² | Ult. Height | Pot size | Root Condition | Habit |
|----|---------------------|---------------------------|-------------|----------|-----------------|----------------|
| 6 | Jasminum officinale | 1 at 750mm linear spacing | 4 to 8m | 15L | Container grown | Several shoots |

Specimen Shrub Schedule

| No | Species | No/m ² | Ult. Height | Ult. Spread | Pot size | Root Condition |
|----|---------------------------|-------------------|-------------|-------------|----------|-----------------|
| 4 | Hedera Helix 'Common Ivy' | 4 | 0.5 to 1m | 0.5 to 1m | 3L | Container grown |
| 4 | Euonymus fortunei | 4 | 0.5 to 1m | 0.5 to 1m | 3L | Container grown |



Legend

-  Fully Grown Sedum Carpet
-  Perimetral drainage - Pebbles
-  Permeable concrete paving
-  Grass/Turf
-  Building Perimeter
-  Property boundary

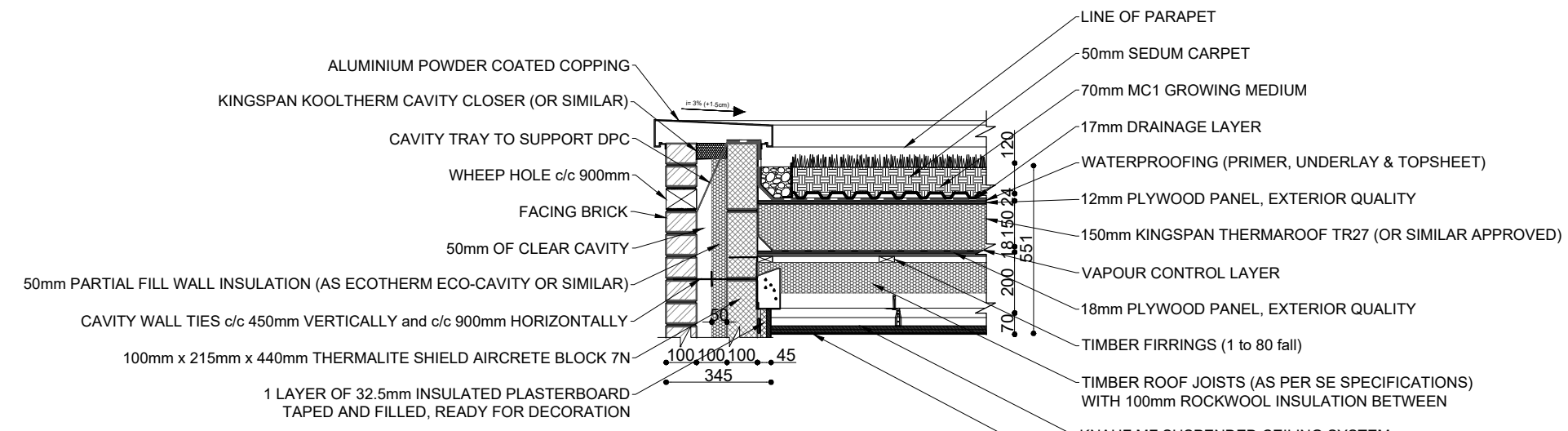
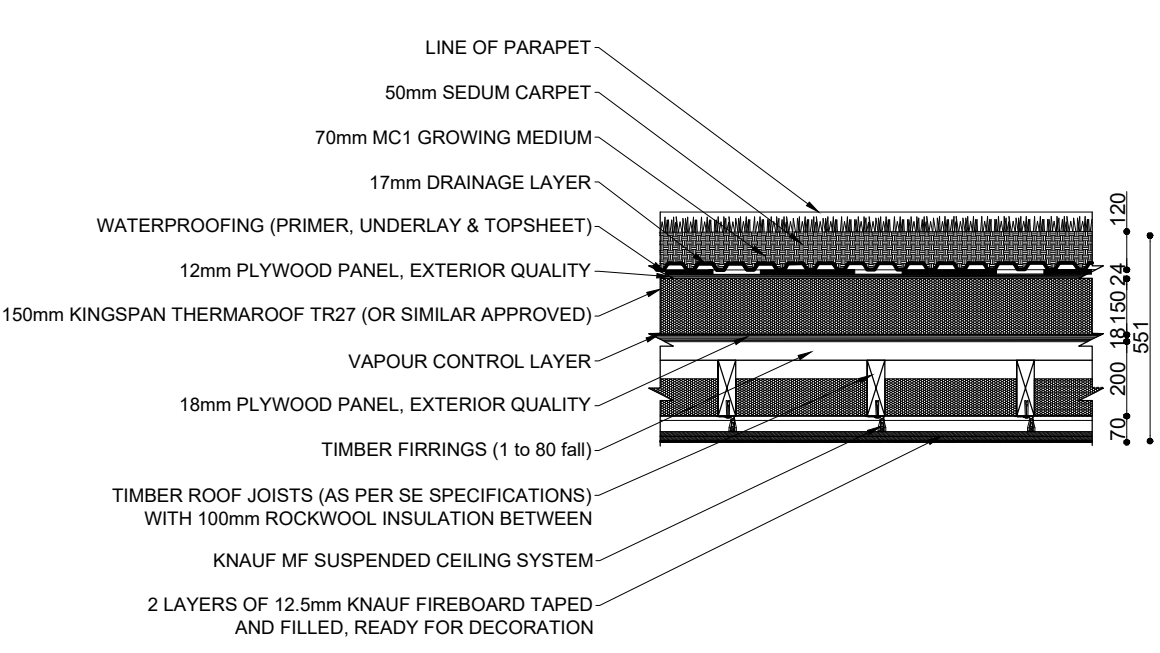


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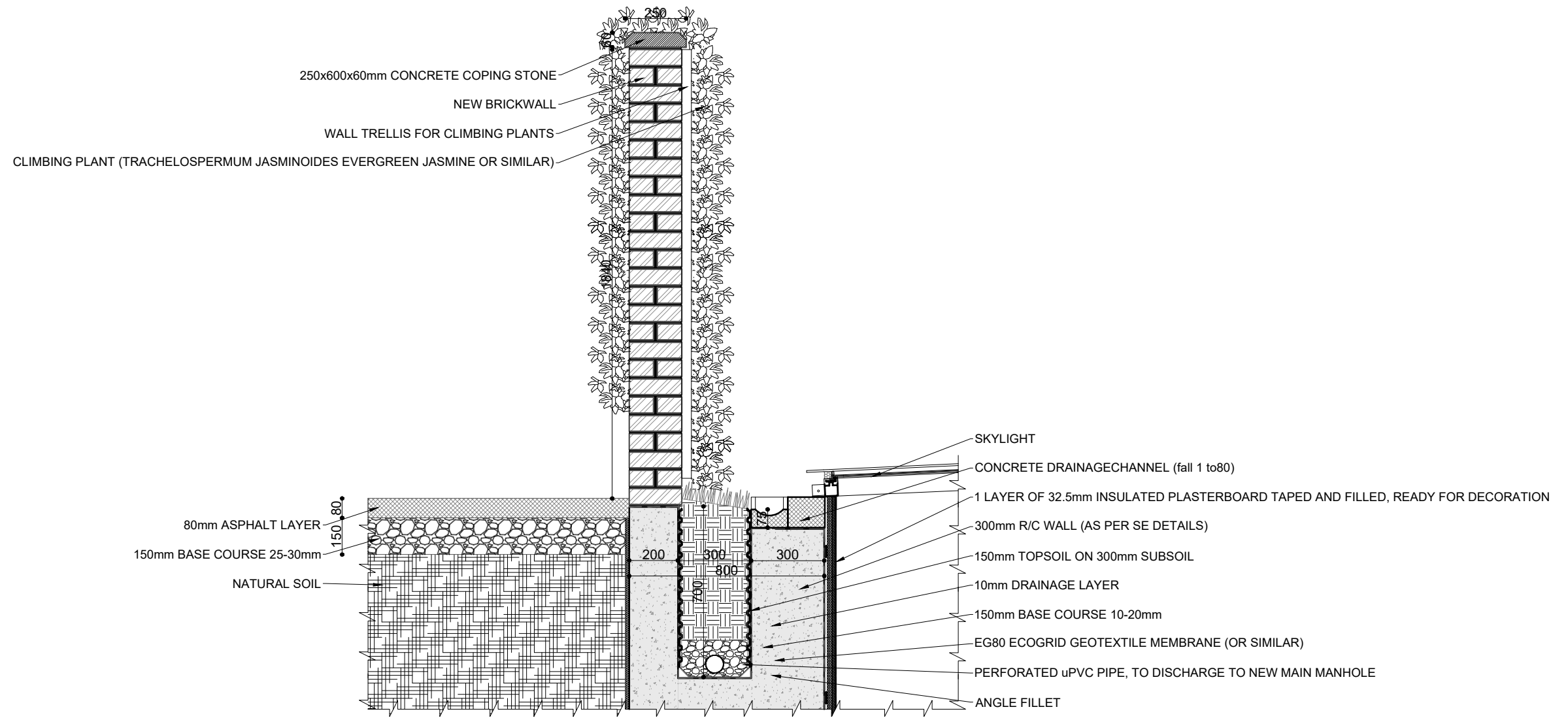
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LIDLINGTON PLACE



Title: Green roof detail
Dwg. Scale: 1:20 @ A3

Title: Parapet detail
Dwg. Scale: 1:20 @ A3



Title: Living wall detail
Dwg. Scale: 1:20 @ A3



GA CONSTRUCTIONS LONDON LTD.

SOFT LANDSCAPE PERFORMANCE SPECIFICATION

1 Lidlington Place
NW1 2JU



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1. Introduction

1.1. Site description

This document has been prepared by GA Construction London LTD, as the appointed contractor responsible for the construction of the approved design, solely for the purpose of discharging condition 4, set by London Borough of Camden:

“Notwithstanding the details shown in the application documents, no above ground construction works shall take place until details of the living roof and living walls including: materials, species, planting density, habitat features, and substrate; a statement of the design objectives, including justification of roof/wall type/species selection; a plan showing the area covered by the roof; a site specific management plan including an initial scheme of maintenance; and a section at scale 1:20 (showing that adequate depth is available in terms of the construction and long term viability) shall be submitted to and approved in writing by the local planning authority. The living roof and living walls shall be fully provided in accordance with the approved details prior to first occupation of the development and thereafter retained and maintained in accordance with the approved scheme of maintenance.”

The site is currently abandoned and empty, mostly covered in asphalt, with direct access from Lidlington Place. The access gate, facing South, is in poor conditions. The brick boundary wall along Lidlington Place is in continuity with the adjoining plots, measuring approximately 1800mm from the street level. The site is surrounded by rear gardens, with the exception of the Western boundary site, which is used as carpark.

The plot is on the Southern Edge of the Camden Town Conservation Area. Lidlington Place is a small street connecting two larger roads with a more commercial vocation: Eversholt Street and Haringdon Square. The site is therefore within the Camden Town Conservation Area at the boundary between the the residential and commercial sub-areas.

In line with the pre-application advice, the approach has been to provide a design that would sit discreetly behind the boundary. A building more akin to a garden building than a new unit.



The ground floor only occupies approximately 60% of the total 107square metres, thus allowing a generous setback on three of the foursides. To further reduce the visibility of the building both from Lidlington Place and the adjoining properties, the ground floor is approximately 800mm below street level.

Access to the property will be exclusively pedestrian and via a gate with key. In line with the pre-application advice, space has been set aside for safely storing two bicycles inside on site. The site has the highest PTAL score of 6B.

1.2. Scope of works

The scope of the landscape specification covers all soft landscape works including earthworks, specimen planting including shrubs, climbing plants and the green roof, along with selective maintenance operations to the building and wider site and boundaries.

1.3. Considerations

The Soft Landscape Specification which follows, indicates the minimum requirements and standards to be provided by the appointed Contractor. It is to be read in conjunction with attached drawings including:

- Landscaping plan
- Planting schedule and details of species
- Landscaping details



2. General Requirements

2.1. Site works

Since the site is within a residential area, good working practices shall be employed and consideration given to all neighbours, workers and visitors adjacent to and within the wider estate during the works, including health and safety, noise, hours of working, site maintenance, storage of materials etc.

All programming and phasing of works shall be agreed with the Client prior to commencement of works, including location and siting of temporary site huts, plant and materials storage and ancillary structures. All areas of work and disturbance are to be feathered-in, made good and fully reinstated on completion of the works. It is the Contractor's responsibility to ensure compliance with any aspect of the Planning Permission and approved conditions.

2.2. Site Evaluations

The contractor will be deemed to have visited the site and to have carried out any investigations necessary on all conditions affecting the work, as no claim on the grounds of lack of knowledge will be entertained. Prior to the commencement of any works the Contractor shall complete a detailed site evaluation particularly with respect to the physical characteristics of the site and the functionality / use.

2.3. Services and utilities

Notwithstanding information which the client may make available to the contractor regarding the position of the existing services, it shall be the responsibility of the contractor to check for below and above ground services, including land drainage, overhead cables and powerlines in the vicinity and obtain service records prior to the commencement of any works, and satisfy himself as to their accurate location and condition.

The Contractor shall protect all existing services, pipes, channels, culverts, water courses etc, and make good at his own expense any damage caused by carrying out the works.



If any services or features may be affected by the works, obtain instructions before proceeding and provide a method statement specific to working in the vicinity of existing utility assets, complying with all current health and safety regulations.

2.4. Materials and workmanship

All materials and workmanship must comply with the relevant British Standards and recognised Codes of Practice for the landscape industry.

All proposed plant material and procedure must comply with the latest relevant sections of B.S. 3936 and B.S. 4428 respectively, and HTA National Plant Specification Appendix 1. All plants should be strong and healthy with a good root system.

2.5. British Standards

Unless otherwise specified all materials and workmanship shall comply with the current edition of the appropriate British Standard. The materials shall be transported, stored and laid in accordance with the requirements or recommendations of the required standards.

Tests on materials and workmanship shall be conducted in accordance with the British Standard and solely at the instigation of the Project Manager.

2.6. Health and safety

All operations must only be undertaken by suitably qualified and trained operatives, who hold the appropriate and relevant certificates of competence and who are suitably qualified and experienced to complete the work to a high standard.

Operations must be supervised throughout by people who have the correct qualifications and experience. Identify hazards, carry out COSHH and Risk Assessments, applying the content of the current relevant legislation and forest industry recognised guidance throughout all operations, including Management of Health and Safety at Work Regulations.



2.7. Soft landscape works

All Service / Drainage positions to be established prior to shrub planting taking place. Minimum distance of drains, new culverts or new services to new and existing trees should be 1.5 m. and should be coordinated to avoid tree locations.

All planting positions to be as shown on the Landscape Plan. Any deviation from this must be reported to the Architect.

All Planting to be carried out within a Planting Season, November – March, unless otherwise agreed with the Client. If planting is to be carried out, out-with a planting season then all plant material to be containerised stock, and of a size as specified. No planting to be carried out during poor weather conditions, ie. when the ground is frozen, waterlogged, or during drought, hot sunshine or persistent dry or cold winds.

All plant material to receive enough water to ensure healthy establishment and correct growth. All materials and workmanship shall be in accordance with construction details and specifications.

2.8. Emergency arrangements

The Client shall be provided with at least one responsible person, with home / mobile telephone numbers who can be contacted in the event of an emergency on site during the course of the contract. The responsible person shall be capable of providing 24 hour, 7 day cover throughout the duration of the contract.

2.9. Waste materials and site maintenance

No material won in works shall be taken off-site or wasted with all non-hazardous materials arising re-incorporated in accordance with good environmental practice to ensure the site is left in as natural a state as possible.

Hazardous or controlled waste materials must be removed from site by a registered carrier and disposed of to a facility properly licensed to deal with that waste in accordance with current HSE guidance and HIE policy. The Client shall be supplied with



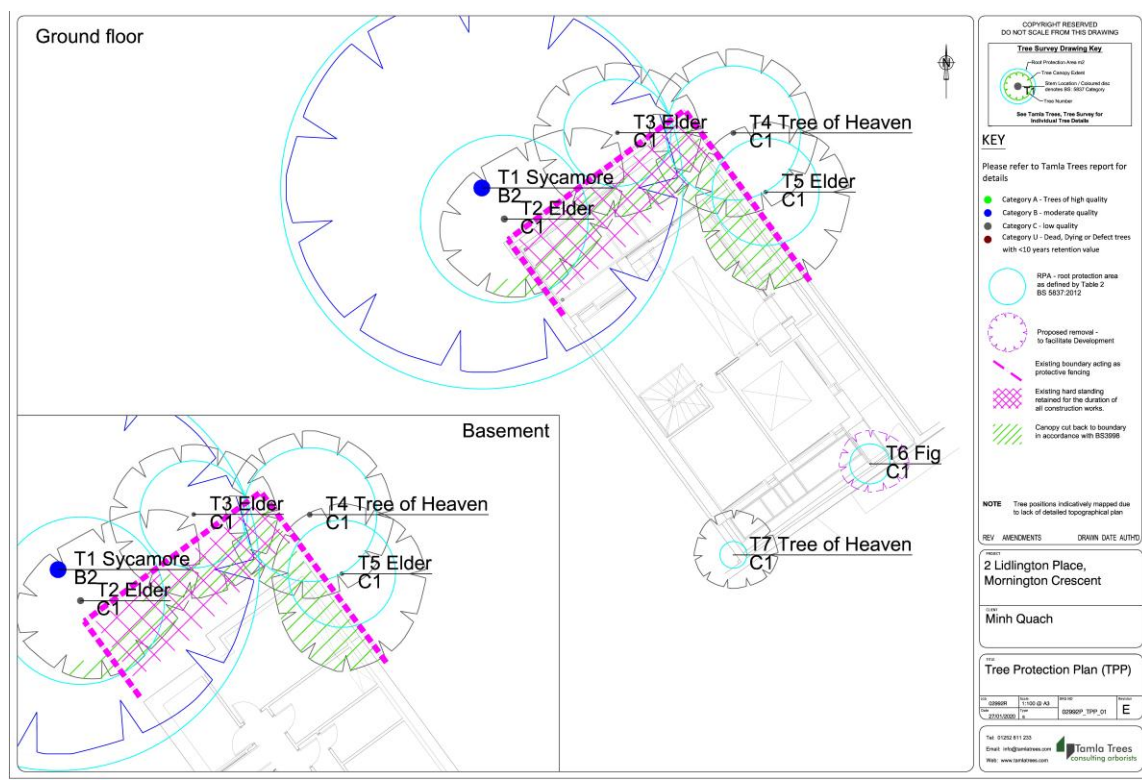
all relevant information relating to the disposal of any waste including the location to which the material is to be taken, the licensed operative and all waste disposal receipts.

All loose materials, tools and plant shall be removed from working areas and placed in the secure compound overnight or removed from the site at the end of a working shift. All excavations must either be filled prior to the end of the day or be covered and protected with appropriate temporary fencing, in addition to any existing or other temporary fencing which may be adjacent.

The Contractor shall maintain all roads and footpaths entering and within the site in a safe and good working manner. Vehicles shall not leave any part of the site unless all mud, clay or other deleterious material is removed from the wheels.

The Contractor shall ensure that all drains, ditches and watercourses within the site are kept clear of any waste, spoil or run-off of slurry from cleaning operations or construction works.

3. Existing vegetation





Actually, at current stage, prior to commencement of any works, there are 7 trees in proximity to the development site. An arboricultural report have been prepared by Tamla Trees Ltd and approved by the Council, to provide advice on issues relating to proposed development.

As stated within the documents, T6 Fig will be removed to facilitate the proposal. The canopies of low levels trees T2 (Elder), T3 (Elder), T4 (Tree of Heaven) & T5 (Elder) will be cut back to provide suitable clearance. The canopy of T1 is sufficiently high over the rear amenity area that pruning is not required to facilitate the build.

4. Subsoil and topsoil spread

Sub-Soil preparation shall include the removal of stone, brick, concrete, wood, wire, pipes debris, rubbish, weed roots and foreign matter of any kind above a maximum dimension of 75mm from the sub-soil formation layer to a minimum depth of 300mm below top-soil. Prior to topsoil spreading and formation of mounding operations aerate sub-soil in soft landscape areas to a minimum depth of 300mm below top-soil. Remove surplus excavated material from the site.

The sub-soil shall be evenly graded to the appropriate formation levels below the finished levels of the top soil to the appropriate depth: Grass 150mm subsoil depth, Shrubs 300mm subsoil depth, Trees 600mm subsoil depth. Re-Use of existing top soil shall only be permitted with the strict approval of the Architect. Any surplus top soil is to be removed from site.

Spreading Topsoil - Spread topsoil generally and making up levels shall be to the approval of the Architect and shall be spread and consolidated in layers of no more than 150mm over existing subsoil in planted areas no deeper than 200mm or grass areas, 450mm for shrub areas and 900mm for trees. Do not compact topsoil. Preserve a friable texture of separate visible crumbs wherever possible. Adjoining soil areas marry in. Carry out all necessary filling to form new soil formation levels which will give finished levels as shown on drawings. Include for loading and depositing sub-soil on site, and for importing fill material.



5. New Planting — Green roof

5.1. Benefits of a green roof

The green roof proposal for Lidlington Place consists in a protective fleece, a drainage layer, growing medium and a pre-grown sedum blanket. A green roof has many benefits at economic, ecological and societal levels. A green roof provides a rainwater buffer, purifies the air, reduces the ambient temperature, regulates the indoor temperature, saves energy and encourages biodiversity in the city. What's more, people are happier in a green environment than in grey surroundings.

5.2. Sedum selection

The Sedum Album Coral Carpet was selected for its evergreen qualities and is fully hardy to survive the harsh London weather. The red flushing leaves adds to the visual drama will full colour all year round for the over looking residents / properties to enjoy a small aspect of nature from their windows.



Sedum Album Coral Carpet

Coral Carpet is a mat-forming, evergreen Sedum with small, fleshy, red-flushed leaves come alive in late spring to early summer with pink tinted, white star-shaped flowers. Coral Carpet foliage is green, flushed red in all seasons. The use of this in our sedium blanket means vibrant and full colour all year round.

Height: 5cm **Spread:** 25cm **Hardiness:** Fully hardy **Conditions:** Rain / Sun

An alternative, is the Sedum Relexum, also evergreen and is fully hardy. While it has a better height, it was felt the colour wasn't pleasing or dramatic enough to the Album Coral Carpet option. Colour and its visual impact was a factor in the sedum selection process.



Sedum Relexum

The low-growing evergreen, spruce-like, succulent foliage stands out beautifully in our sedum blankets. Yellow flowers appear in July right through until mid October. To get this variety to reach maturity in time for sale we propagate Reflexum in plug form in our nursery and insert into the blanket. A time consuming job but we feel worth the extra effort.

Height: 25cm **Spread:** 20cm **Hardiness:** Fully hardy **Conditions:** Rain / Sun



5.3. Product specification

Drainage Layer

Uses:

Drainage Layer is used as a drainage, protection, filter layer for extensive green roof systems on flat roofs.

Characteristics / Advantages

- 4 in 1 product (drainage, protection, filter and root expansion layer)
- Light and easy to cut
- Suitable for low pitch roofs
- High porosity and very high water transmissibility
- Drainage Layer does not rot
- Compressive strength
- Recyclable

Tests Approvals / Standards

Quality management system EN ISO 9001/14001

Reaction to fire according to EN 13501-1, class E

Product Data:

Appearance Surface: structured

Colour Drainage layer: coloured Filter fleece: light grey Packaging,

Packing unit: 40 pieces per pallet (90 m²)

Storage Conditions Drainage Layer shall be stored at dry conditions.

Shelf-Life Drainage Layer does not expire during correct storage.

Geocomposite Properties

| | | |
|--|-----------------------|---------------|
| Thickness at 2kPa (mm) | 12mm | EN ISO 9893-1 |
| Mass per unit area (g/m²) | 1 040 approx | EN ISO 9894 |
| Tensile strength MD / CMD (kN/m) | 24 / 24 -10% | EN ISO 10319 |
| Elongation at peak MD / CMD (%) | 45 / 45 nominal | EN ISO 10319 |
| CBR puncture resistance (N) | 3 900 -20% | EN ISO 12236 |
| Perpendicular Water Inflow Dimple Side Flat side | | |
| Water flow at 50mm head (l/m²-s) 103 2.5 ±30% EN ISO 11058 | 103 2.5 ±30% | EN ISO 11058 |
| At 2kPa permeability (coefficient) (m/s) 2.5 X 10-3 ±30% EN ISO 11058 | 2.5 X 10-3 ±30% | EN ISO 11058 |
| Breakthrough head (mm) 0 nominal | | |
| In-plane water flow MD and CMD HG = 1.0 HG = 0.1 Hydraulic gradient | | |
| at 20kPa confining pressure (l/m-s) | 2.40 ±0.40 0.67 ±0.13 | EN ISO 12368 |
| at 100kPa confining pressure (l/m-s) | 1.95 ±0.33 0.53 ±0.11 | EN ISO 12368 |
| at 100kPa confining pressure (l/m-s) | 1.45 ±0.24 0.37 ±0.07 | EN ISO 12368 |



with soft foam contact surfaces to simulate textile intrusion

Resistance to weathering to be covered in 28 days EN 12224

Resistance to chemicals EN 14030 Excellent EN 14030

Design life 120 years (manufacturer's declaration)

Geotextile Properties

Thickness at 2kPa (mm) 1.2 ±20% EN ISO 9863-1 1.2 ±20% EN ISO 9863-1

CBR puncture resistance (N) 1 600 -20% 9.5 / 9.5 -13% EN ISO 10319
EN ISO 12236

Pore size 090 (µm) 120 ±30% EN ISO 12956 120 ±30% EN ISO 12956

Tensile strength MD/CMD (kN/m) 9.5 / 9.5 -13% 1 600 -20% EN ISO 12236
EN ISO 10319

Dynamic perforation cone drop (mm) 32 +20% 32 +20% EN EN ISO 13433
EN ISO 13433

Type and material Non-woven needle-punched and heat-treated

Product Dimensions

Standard roll dimensions 1.1 m x 50 m

Growing Medium:

Install 20mm multi-layer extensive roof substrate composed of mineral bulk mixture with a proportion of mineral and organic matter.

Total pore volume > 60-70 Vol %

Max water capacity ≥ 35% Vol

Key data

Dry weight approx. ≤ .75 g/cm³

Water saturated ≤ 1.4g/cm³

Organic content ≥65 g/L

pH value 5.8-7.9

Water permeability ≥ 0.6 mm/min

Compression factor 1,2

Vegetation Layer:

Please see data sheet for information

Ecology, Health and Safety Information The product does not fall within the EC-regulation of hazardous goods. As a result, a material safety data sheet following EC-Guideline 91/155 EWG is not needed to bring the product to the market, transport or use it. The product does not damage the environment when used as specified.



| Sedum Blanket Datasheet: | |
|---------------------------------|---|
| Carrier | Predominately rotttable Cocomat with geo textile weave |
| Substate | Locally produced mix containing at least 25% recycled green waste |
| Vegetation composition | Sedum Acre Aureum, Sedum Album Coral Carpet, Sedum Album mini, Sedum Album Athoum, Sedum Hispanicum, Sedum Summer Glory, Sedum Reflexum, Sedum Weihenstephaner Gold, Sedum Voodoo |
| Vegetation coverage | Vegetation coverage |
| Thickness | 2.5cm -4.5cm |
| Water saturation weight | 18-22 kg /m ² |
| Standard Size | 1 m x 1.5 m |

5.4. Maintenance schedule

- Liquid seaweed fertilizer
- Apply 10ml per 5 litres. A handheld sprayer is ideal for this and can be purchased in any hardware or DIY store. Spray as a fine mist until it drips off the plants' surfaces.
- Cut the flowers off and remove them in August.
- Program should commence once The Green Roof is installed.

Week 1

Watering in the first week is crucially important. If the Blanket is rolled out in very dry conditions it must be watered every other day during this first week. A quick establishment is very important for the plants to cope with the harsh conditions on a roof.

Week 3

By this stage the Sedum should be showing new signs of growth with mostly bright green, new foliage this will be in contrast to the darker shades of the more hardened foliage. This will indicate the Sedum has travelled well and is beginning to establish. From this point Green Roofs Ireland Sedum Blankets are low in maintenance. Mainly because of the beginning of the growing season, weeds will instantly start to move into any areas of bare substrate and a spot weed will be required. Due to our coverage of



Sedum and intense weeding program during propagation weeds find it very difficult to establish themselves in the blankets.

Week 6

At this stage a walk of each roof is required to check for any weeds. Pulling weeds, whilst they are very small will cause less damage to the Sedum and also before they are allowed to seed. This is paramount as a simple grass weed will turn into a small lawn if a roof is not properly cared for during the first year. A thorough inspection and spot weed at this stage could save weeks of labour in weeding or replacing sections of Blanket..

Week 12

The roof will be well established and by this time a simple check on each roof is all that is required. The comprehensive care plan during the Spring months will mean weeds will not be seeding and spreading. The Roof will also be flowering soon so it is important that foot traffic is kept to a minimum.

Week 24

As the growing season will soon be ending a simple inspection and spot weed is required. At this time fertiliser is used to brighten up the foliage before the winter.

Week 36-48

This will be a winter inspection to check on the health of the Sedum. As our winters are changing we are experiencing more and more extreme weather conditions. The most Northerly Location in the United Kingdom is going to face the worst of this therefore, a winter visit is vital to monitor its performance.

Year 2

Four scheduled visits to align with the growing season and throughout with one visit in the winter. A Green Roof is a living organism it is changing on a daily basis and is highly dependent on the weather. Therefore it is difficult to quantify exact amount of water or labour required. A good relationship with excellent communication between the client and the grower is required and combined with a maintenance schedule tailored for the application this will create a healthy and low maintenance Green Roof.



6. New Planting — Living wall

6.1. Benefits of a living wall

The boundary wall that divides the property with Lidlington Place will accommodate a living wall. Climbers will be planted on the inner side of the wall and a metal grid or timber trellis fixed onto the wall will allow them to grow from one side to the other. Bricks will match with existing neighbour walls.

A living wall has many benefits. It enhances privacy and acoustics with a minimal maintenance or space needed. A living wall can significantly reduce air pollution and has a positive impact not only on biodiversity, but also on neighbourhood appearance.

6.2. Plant selection

As shown in the plant schedule, the selected climbing plants are Jasmine and Hedera Helix, the common Ivy. Combined both, they will offer a colourful, seasonal variable view from the inner side, with an unmistakable flavor to everyone passing by. Furthermore, both plants require less efforts to maintain them. All plants will be to BS 3639, container grown, generally in 3 litre pot size. All plants to be planted in accordance with Landscaping Plan attached to this document.



6.3. Maintenance schedule

Pruning

- Depending on how wide you want the hedge, you can prune the hedge once or twice a year. The best months for pruning are April/May and September/October. Thus, the new shoots can still grow and harden off for winter. You only need to prune the new shoots.
- To make the hedera grow more densely, first let vines grow and do not prune during the initial period. Then you must trail the new hedera shoots through the grid.

Root growth

- Plants develop both above and below the surface. The growth of roots is not to be hampered by, for example, disruptive layers or concrete elements.

Discolouring of the leaves

- During the winter, discolouration of the leaves makes for a reddish/copper appearance. Hedera species typically display this leaf discolouration when the colder weather arrives. The lower temperatures cause the leaf cells to produce a defence mechanism against the cold, making the leaves turn a different colour. When temperatures rise, the substances used for leaf discolouration are again reduced and the leaf turns green.

Planning for your first winter

- Plant the selected range as long before the winter as possible, and make sure it is well watered to achieve a good root system before the winter.
- If a longer period of frost is predicted, make sure plants are well watered. In frozen soil the plants cannot absorb water, but it will still lose moisture evaporation through its leaves.
- During periods of light snow or frosty surface the screens can be watered as normally.

Irrigation

- The climbing plants should be watered throughout the year. This is especially important during the first year and in hot / dry periods. The screens require regular sufficient water (about 30 litres per linear metre).
- Plants also need water in the winter! When the sun shines in the winter, Hedera leaves lose water through evaporation. When the soil is dry in winter and frost-free, it is advisable to water regularly.



- If you do not want to water plants regularly with a watering can or garden hose, you can create a drip hose with an automatic irrigation controller. Regularly check if the hose for blockages or leaks.

Fertilizing

- It is necessary to regularly fertilize the climbing plants to encourage good growth and leaf development. It is preferable to use slow-release fertilizers. Fertilize at least once a year, in the spring. If planting screens before August 15th, fertilize the screens one month after installation. If planted after August 15th, only fertilize the screens in the spring. The type of fertilizer to use depends on the nutritional level of the soil. On poor or exhausted soils additional fertilizer is needed. If you are unsure as to the nutritional level of the soil or which fertilizer to use, a soil sample can be analyzed by a soil testing laboratory.

