

The Network Building, five year maintenance and management plan

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Please read in conjunction with the landscape drawings:

1, Purpose of the management plan

Permission was granted for erection of a development of offices with associated roof terraces at The Network Building, 95 to 100 Tottenham Court Road, London, W1T 4TP. The planning reference is 2020/5624/p. This Landscape Management Plan is an accompanying document submitted as part of a reserved matters application.

The purpose of this Landscape Management Plan (LMP) is:

To ensure that clear objectives for the accessible roof terraces and one small planted inaccessible roof terrace at The Network Building, 95 to 100 Tottenham Court Road, London, W1T 4TP.

To set clear standards for the performance of landscape maintenance work following handover from the landscape contractor.

To develop work programmes and schedules for landscape maintenance staff.

To help in the allocation of financial resources for landscape maintenance.

To help monitor success and progress against management targets.

2, Site/proposal Description

The landscape is predominately on level 9 of the building (the top floor) where there is an accessible roof terrace.

The level 9 roof terrace is on the St Paul's viewing corridor, and as a result of this there are no taller buildings anywhere nearby. There will therefore be no shade on the roof which will be fully exposed to the sun at all times. Likewise there is no shelter from the wind.

These conditions suggest that a successful planting scheme would need to be heavily watered, yet we also have a responsibility to ensure that the planting here can survive without heavy water to reduce its overall environmental impact.

We are therefore looking for a planting type that is:

- Tolerant of strong exposure to the sun
- Tolerant of drought
- Tolerant of wind
- Can grow on thin soil

We would add one more criteria to the list which is that the planting should be of a type that can accommodate a mixture of native and non native species, wild flowers, and biodiversity improvements whilst seeming to come together as one cohesive and aesthetically continuous gesture. I.e. A scheme that combines amenity and biodiversity without incongruous patches appearing.

We therefore looked to the gravel garden as a typology upon which to base the matrix of proposed plants.

The 50mm mulch layer of gravel will serve to hold moisture in the soil below and also to prevent weed ingress.

The landscaping will be irrigated using a below ground drip irrigation system.

The landscape incorporates biodiversity orientated features including dead wood and temporary water bodies.

3, Summary of components of the scheme

There is an accessible roof terrace at level 9 with soil of depths varying from 80mm to 350mm.

There is an inaccessible roof terrace at level 8 with soil at 200mm depth.

4, Management Aims

The main aims for site landscape management and maintenance are:

To present an attractive and safe environment for users of the offices and their visitors.

To ensure that hard and soft landscape areas are fit for purpose and do not pose a health and safety hazard to the public.

To ensure that newly planted areas become established.

To prevent weed ingress.

To keep the site clear of litter and rubbish.

To carry out maintenance work according to best practice using sustainable techniques and materials.

To encourage biodiversity.

5, Review

The document should be seen as an operational guide, subject to change and improvement as the different landscape features mature and develop.

The Landscape Management plan will be reviewed and revised annually following annual monitoring of site conditions and species population. An annual monitoring report will recommend any necessary changes to the LMP and identify management required.

6, Planting maintenance and proposed Character

The general thrust of the proposed planting in terms of character form and maintenance is naturalistic. As such none of the maintenance usually required to look after 'formal' planting, replacement of annual and biannual flowers, and clipping of formed shrubs and trees will be required. Maintenance will take the form of regular inspections for damaged or broken/dead plant material and pruning of the same, and clearance of leaf litter.

The main driver for most planting schemes in commercial settings is neatness. The perceived lack of neatness is a commonly accepted negative, and in fact neatness is a relatively simple maintenance standard to keep. Neatness can be achieved with monocultural schemes, extensive use of evergreen planting, especially evergreen shrub/hedging, weedkilling and hedgecutting. The 'neat' landscape requires regular maintenance inputs with little differentiation, typically walking around with a hedge trimmer more or less in the horizontal position or with a weed sprayer pointing at the ground. This is a naturalistic planting scheme and as such it will not always look neat, but it must look cared for which is subtly different but no less important. A cared for landscape requires less maintenance input (maintenance need not be so frequent) but more skill and differentiation in the application of maintenance.

7, Irrigation

All planting requires watering during establishment, especially in periods of drought. The aim here is to create a scheme that is stable in the long term and will only require watering in cases of drought or during heat waves. All of the plants are such as can be found in the natural environment surviving in the long term without water. However all of the planting will require watering during the first one to three years of establishment depending on weather conditions, and may need watering thereafter on occasion as a result of climate change. By this we mean that in normal British weather the vast majority of planting would not require watering after the first year of establishment, but recently we have had to very long dry spring periods and this type of weather, or indeed a long hot dry summer will extend the establishment watering period. Water will be delivered by way of an automated irrigation system with a below ground drip feed. This is to be used as a tool to deliver minimal quantities of water when the plants are observed to be wilting, not as a constant flow.

8, Plant replacement

By planning condition, and notwithstanding for the benefit of the scheme, any plant that dies, or is substantially damaged during the first five years after practical completion should be replaced within the next planting season, replanting like for like in term of species and size excepting only in cases where adverse soil contamination has taken place, for example honey fungus. Whilst the question of whether a plant is dead or not is relatively easy to agree, what constitutes damage is a more open question. We would describe a damaged

plant in this case as a plant or tree that cannot be returned to a balanced natural form, and to good health, by way of formative pruning after damage. Inspection for damaged/dead plants and notification of the same, and replacement plan should be made at each maintenance visit.

If a particular species fails to establish successfully then an alternative, comparable species should be considered as replacement, in agreement with the landscape consultant.

9, Weeding

The intensity of weeding activity will tend to decrease as the scheme matures and the plants become dominant with extensive root spread and well developed foliage/ground cover preventing weeds from finding a footing. During establishment the gravel mulch will assist in keeping weed growth down. All weed killing should be by hand pulling rather than application of glyphosate, and so the maintenance workers will need to have the necessary skills to identify weeds as distinct from the plants that are part of the scheme. It is important to understand that the requirement for weeding has less to do with the 'look' of the scheme than to do with its successful establishment. Therefore careful weeding during establishment will pay off by creating a healthy, well developed scheme that is dominant and thereafter successful in preventing weed growth/ingress. Overall good maintenance during establishment will pay off with very low maintenance thereafter.

Research has shown that planting smaller plants results in better health and development of the planting scheme over time. This is because small plants are better able to adapt to site conditions than more mature specimens. There is a resulting payoff between the lower cost of planting small, the higher cost, initially of looking after small plants (a little more weeding) and the ultimate reduced maintenance cost of looking after a healthy well established landscape: Smaller plants, higher initial maintenance, lower long term costs in terms of maintenance and replacement planting.

9, Four provisos

1, We set out below the maintenance requirements by planting type and area, timings thereof and the like, but of course any of these types of maintenance may be required when damage and or extreme weather conditions of one type or another occur.

2, We hope that it has become clear that it has become clear that this is expressly designed as a long term low maintenance scheme, but that a skill level in the maintenance operatives is required. A little care and skill in maintenance is the difference between a landscape that is loved and can be loved by the people who live in it, and one that is uncared for uninhabited and disrespected by those who live in it and pass by. The single biggest reason for a landscape requiring high levels of maintenance inputs is poor maintenance. If the plan set out below is followed this landscape will in time become very low maintenance.

3, Maintenance operations are to be carried out with regard to BS4428: Code of Practice for General Landscape Operations. Maintenance of soft landscaping (other than amenity turf)

to have regard to BS7370- 4: Grounds Maintenance. Recommendations for Maintenance of Soft Landscape.

10, Maintenance Schedule

10.1 Level 8 and 9 Green roofs

Management Aim To successfully establish the planting scheme.

Ref	Management Objective	Monitoring task/type	Maintenance method	Timing
10.11	Removal of invasive species as listed under schedule 9 section 14 of the wildlife and countryside act 1982.	Visual inspection for registered invasive species	If found Eradicate appropriately using a contractor who is accredited by the INNSA and is following their standards and code of conduct.	Monthly inspection, removal as recommended by specialist contractors.
10.12	Removal of weeds not listed under schedule 9 section 14 of the wildlife and countryside act.	Visual inspection for weeds. In this sense a weed will be any plant that is not included in the planting plan/schedule unless it be a native British wild flower.	Any weeds that are found should be removed by pulling, loosening the soil and removing the plant and all of its root system. Use of Glyphosate or other herbicides is not be permitted. Uprooted weeds should be removed to a composting facility.	Monthly from November through to February, fortnightly from Spring through to autumn (March through to October)
10.13	Cutting back of damaged growth generally (excepting dead winter structure post November)	Visual inspection for bent or broken stems	Prune back with a clean cut at nearest undamaged branching point	Monthly from November through to February, fortnightly from Spring through to autumn (March through to October) excepting point 10.14 below

Ref	Management Objective	Monitoring task/type	Maintenance method	Timing
10.14	Cutting back of dead growth and seed heads in winter	Dead growth/seed head structure should be maintained as deep in to the winter as possible. Visual inspection should be made for signs of collapse in planting structure especially after wind or snow or heavy rain. Once signs of collapse or rot are found cut back.	Shake out any seed heads to ensure that the seed bank is maintained, then cut back growth to 3cm above ground level and clear the dead materials from site disposing to an appropriate composting facility.	Fortnightly inspection From November onwards.
10.15	diseased plants	Check for signs of Stunted growth – Spots on leaves – Areas of decay – Growths – Withering or leaf curl-	Remove and destroy any growth effected by fungus. Treat with fungicide if appropriate.	Monthly from November through to February, fortnightly from Spring through to autumn (March through to October)
10.16	Infestation	Check for signs of insect infestation, excessive insect life particularly green fly and black fly. Also Lily Beetle.	Treat with nematodes as appropriate, or hand pick, or otherwise by organic controls such as horticultural oil, insecticidal soap, or neem oil . Use of pesticides, not permitted.	Monthly from November through to February, fortnightly from Spring through to autumn (March through to October)

Ref	Management Objective	Monitoring task/type	Maintenance method	Timing
10.17	Replacement planting	Monitor for plants requiring replacement due to infection as 10.15 or otherwise damaged beyond compare by extreme weather or infestation or failure of water supply	Where plants have died replace like for like in the same location and at the same size in the next planting season. In the meantime remove from site and compost as appropriate. In cases of significant failure of a particular species contact the landscape architect (fflo) to discuss replacement with an alternative species. In such cases an alternative may be used but planted at the same size and in the same locations as the dead plant.	Monthly from November through to February, fortnightly from Spring through to autumn (March through to October)
10.18	Irrigation pipes	Check for exposed pipes	Clip back in place and cover with soil and refresh the mulch layer above	Fortnightly
10.19	Irrigation leaks	Check for standing water, saturated soil, or running water in the beds	Investigate and fix pipe work as appropriate	Fortnightly

Ref	Management Objective	Monitoring task/type	Maintenance method	Timing
10.20	Irrigation generally	Check for standing water, saturated soil, and extremely lush green areas of planting. Monitor the supply such that the planting only receives the minimum water required for establishment and survival. Seek to reduce the annual supply as the planting scheme establishes and matures.	Control of the irrigation system via the zoned computer supply system and moisture sensors.	Fortnightly and annual review together with the landscape architect FFLO.
10.21	General gravel mulch maintenance	Check for soil finding its way through to the surface of the mulch, and areas where mulch is thin	Brush back mulch to achieve an even surface of gravel of at least 30mm depth.	Fortnightly
10.22	Gravel mulch depth	Check depth of mulch at 3m intervals throughout the beds.	Top up using the specified pumice and limestone gravel mix to the specified depth and t achieve a clean even gravel surface free from detritus or soil.	Annually in the winter after cutting back dead growth.
10.23	Bed interface care	Check for loose gravel and or soil splash and or dead foliage at the interface with hard landscaping.	Brush back so that the hard landscaping is free from gravel soil or arisings.	Weekly.

Ref	Management Objective	Monitoring task/type	Maintenance method	Timing
10.24	Biodiverse features	Monitor as above from 10.13 through to 10.23 but see specifics to the right.	Generally biodiverse areas of the roof should be left to grow as they will with very low maintenance inputs. Any dead growth should be left in place as long as possible, plants should be allowed to self seed wherever possible, weed ingress, where native, should be permitted, infestation, unless by a single dominant species, should be permitted. Use of fertiliser, not permitted.	Fortnightly and annual review together with the landscape architect FFLO.
10.25	EPDM membrane to biodiverse features	Check for leaks, and loose edges.	Any loose edges should be buried using the surrounding rock and gravel mix if found. Leaks should be repaired if found.	Monthly