

GUIDELINES

SKY GARDEN GREEN ROOF MAINTENANCE

Version 1.0

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All green roofs will require maintenance; it is important that access is considered at the design stage. Maintenance should be conducted by qualified personnel. This will help ensure the initial establishment and continued health of the green roof system. It is strongly recommended that the installing contractor remains responsible for the maintenance of the green roof during this establishment stage (between 12 - 15 months) and prior to the assignation of maintenance duties to the building owner's representative. Maintenance contractors, with specialist training in green roof care from organisations such as GRO, should be used where possible.

When designing a green roof, it is important that the green roof system is specified accounting for any budgetary constraints. The costs of roof maintenance should therefore form part of the life cycle cost analysis for the building, allowing the most appropriate green roof specification to be realised.



GENERAL MAINTENANCE ACTIONS

All maintenance actions carried out at roof level must be in full compliance with the appropriate health and safety regulations, and particularly those specifically dealing with working at height. BS 4428:1989 - Code of practice for general landscape operations (excluding hard surfaces) and BS7370- 4:1993 Grounds maintenance - Part 4: Recommendations for maintenance of soft landscape (other than amenity turf) provide guidelines for maintenance actions.

1.1 IRRIGATION & WATERING

Irrigation is typically required for the initial establishment of the green roof for a period of 6 - 8 weeks depending on natural rainfall during this time. However, once vegetation cover is achieved, irrigation can be reduced.

All green roofs will need watering in periods of extended drought i.e. more than 6 weeks without any rain.

Care should be taken not to overwater green roofs, as this may harm the plants or overload the roof.

1.2 FERTILISING

GRO does not recommend regular or high use of fertiliser on the low-nutrient growing mediums used on green roofs as they can encourage invasive weeds and grasses and may leach into the watercourse. Each green roof should be assessed prior to any addition of fertiliser.

NOTE: Fertiliser should be slow and long release, and only be applied if downpipes are isolated from mains sewage system.

Intensive and simple intensive roofs are based on a more fertile growing medium and the planting installed will require regular fertilisation.

1.3 GENERAL VEGETATION MAINTENANCE

- Always remove species with large growth habits or aggressive root systems.
- Any wind-blown seeds or cuttings should be removed before they have the opportunity to take root.
- Many grass species can be invasive and should be removed from extensive green roofs, unless designed into the planting scheme.
- The ecological and aesthetic requirements of the site should guide the management of dominant species and habitat over time.
- Cut back taller flowering species to approx. 150mm above substrate surface in autumn/ winter after seeding.
- Excess dead plant matter should be removed to avoid encouraging fungal disease. However, for maximum wildlife support, care should be taken not to remove all vegetation straight after flowering as many insects over-winter in hollow plant stems. For this reason, rotational cutting (where not all vegetation is cut simultaneously) and removal is advised.

1.4 GENERAL CLEARANCE/REMOVAL

Generally, the removal of dead material is desirable as it allows plants the space to develop a greater coverage, improving the finished appearance of the roof, whilst also reducing the risk of fungal disease forming and spreading. However in some biodiverse applications, removing plant debris could be counter-productive in creating habitat.



MAINTENANCE ACTIONS

2.1 EXTENSIVE ROOF MAINTENANCE – < 100MM LOW NUTRITION SUBSTRATE

IRRIGATION: Post-establishment, irrigation is not generally required for extensive green roofs. However, the facility to water should be in place, if possible.

FERTILISATION: Extensive green roofs typically have low nutrient requirements. If required, they can be fertilised on an annual basis, each spring, using a slow-release fertiliser.

PLANT MANAGEMENT: Removal of undesirable plant species and fallen leaves should take place twice each year. General: Drainage outlets (including inspection chambers) and shingle/gravel perimeters to be cleared of vegetation, twice yearly.

2.2 BIODIVERSE ROOF MAINTENANCE – 80MM – 150+MM VERY LOW TO LOW NUTRITION SUBSTRATE

IRRIGATION: Typically, not required.

FERTILISATION: Generally not required, particularly where indigenous species are being encouraged to replicate native habitats. Whilst a low vegetative density is common, zero vegetation is generally undesirable.

PLANT MANAGEMENT: A maintenance program should be drawn up to follow the intended biodiversity objectives.

GENERAL: Drainage outlets (with inspection chambers) and gravel/shingle perimeters should be inspected twice yearly and cleared of any living or dead vegetation.

PLEASE NOTE: Maintenance should take account of the intended wildlife support, in addition to standard green roof maintenance procedures. Care should be taken not to remove all vegetation after flowering as many insects hibernate over-winter in hollow plant stems.

