British Museum, London ECP: Incoming Substation (ISS)

Landscape Maintenance Plan

October 2024





Illustration of Landscape Proposal

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1.1 Site context

The British Museum is located in the Bloomsbury area of London. The landscape associated with the proposed Incoming Substation is to the east side of The British Museum, positioned between The White Wing and Montague Street, as shown in Figure 1 & Figure 2.

1.2 Purpose of this report

This document serves as a source of information for the long-term maintenance of the landscape and biodiversity of the project site. The aim of managing the landscape is to ensure that it successfully establishes and therefore contiunues to function in the way it was designed. This process maintains and enhances the biodiversity value of the landscape while ensuring it is also a visually attractrive environment. The report is to be read in conjunction with all relevant landscape plans, planting plans, details and specifications prepared.

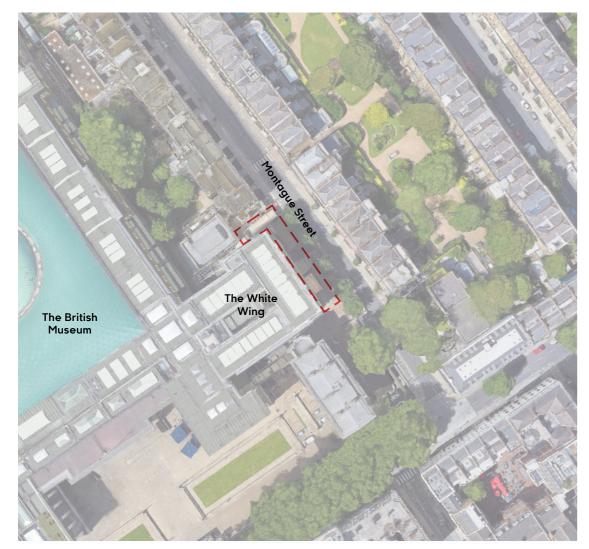
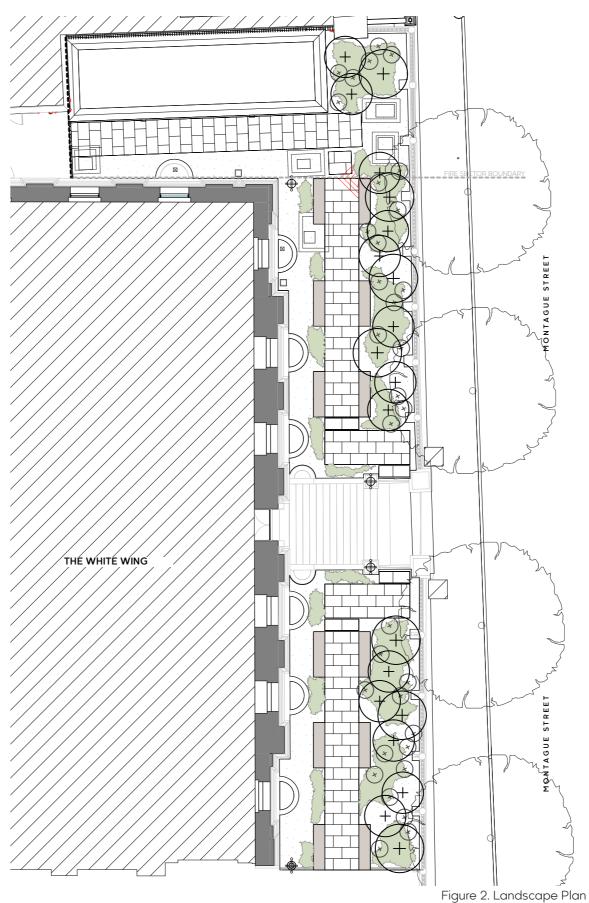


Figure 1. Site Location Plan



Key:



Proposed tree planting



Proposed shrub planting



Proposed groundcover planting in gravel mulch

2.1 Aims of Management

2.1.1 General Aims of Managment

- The aim of managing the landscape is to ensure that the landscape successfully
 establishes and thereafter continues to function in the way it was designed.
- Establish a structural, highly diverse and species rich perennial plant community
 that is visually attractive from the streetscape whilst supporting a wide range of
 biodiversity throughout the year.
- To ensure the biodiversity value of the landscape is maintained and enhanced.
- To ensure the landscape is clean & visually attractive.
- To ensure the new landscape reflects the local landscape character.
- To control invasive and other undesirable species.

2.1.2 Features to manage

The landscape found as part of the Incoming Substation scheme contains the following features:

- · Species rich mixed perennial herbaceous and shrub planting with bulb layer
- New multsitem tree planting

2.1.3 Ecological Trends & Constraints

To provide sufficient long-term maintenance for the landscape it is important that we consider the patterns and changes that could occur to the landscape over time.

Climate Impact

Climate change can significantly impact upon newly developed landscapes.

- Longer growing seasons can increase the need for maintenance activities such as mowing, pruning and pest management.
- Increased frequency and severity of droughts can stress water resources, making irrigation more challenging.
- More intense rainfall events can lead to soil erosion, waterlogging, and damage to plant roots.
- Warmer temperatures can extend the range and lifecycle of pests, leading to more frequent and severe infestations.
- Higher temperatures and humidity can create favourable conditions for plant diseases to spread.

Water

The sustainable and responsible use of water is a key consideration in landscape management. A balance must be struck between correctly irrigating plants to ensure successful establishment and conserving water in times of drought. An allowance for increased irrigation requirement should be factored into the first 3 years of planting establishment, following which it can be significantly reduced. Close liaison between the grounds team/contractor and client management will ensure a satisfactory outcome is achieved.

Plant pests and diseases

Globally an increase in pests and diseases has become apparent in recent years, due in part to greater globalisation of trade and the impact of climate change. Biosecurity measures will be put in place, such as planting a range of different plant genera and species; specifying British provenance stock and requesting full documentation of plant origin, consignment details, impact of pest / disease and/or plant passports.

Timing of operations

Shrub and tree works will take place outside of the bird nesting season in order to protect wildlife. In order to maximise the opportunity for birds to eat berries, perennial cut backs will ideally take place in January / February.

Presence of invasive species

Managing invasive species, should any arise, will be appropriate for the species in question and will minimise risk to non-target species.

2.2 Scope

3.2.1 Management period

Management should continue in line with this plan for a period of ten years.

3.2.2 Management responsibilities

The organisation implementing this plan will need to hold the necessary certificates of competence to implement landscape management operations on site. The organisation will ensure that the maintenance complies with best practice standards and all relevant health and safety procedures, protection of the environment, avoidance of pollution and protection of protected species and habitats.

3.2.3 Document review

In order to ensure that the plan continues to remain appropriate, applicable and effective, a review will be undertaken to ensure that all information contained within the document remains relevant. This review will be undertaken once every 5 years. Should it be determined that the aims of the plan are not being met, remedial action will then be identified, agreed and implemented so that the development still delivers its objectives of the originally approved scheme.

2.3 Management Actions

2.3.1 Management - General

- All materials and workmanship to be of the highest standard and the contractor is to make good any planting defects.
- Regular inspections and litter picking across the site. Litter to be removed from site
 and disposed of appropriately to a licensed facility.
- Inspect quarterly for signs of invasive and pernicious weed species [Japanese knotweed, Giant Hogweed, Himalayan balsam etc.]. If discovered implement an appropriate programme for their treatment and removal according to national regulations and standards. The contractor is to notify the Landscape Architect of the presence of any noxious, invasive or harmful weed species found in the Weeds Act and Wildlife and Countryside Act.
- Weed control to be undertaken by manual hand removal, however this can be detrimental to the ecology of the area and may allow more gaps for more weeds to establish. Arisings to be removed and properly disposed of.
- Unless otherwise stated, organic green waste arisings will be composted or removed to a local authority or other appropriate composting facility off-site.
- Any plant defects or failures becoming apparent during the establishment period shall be made good as soon as possible to ensure the appearance of planting is always of that in healthy thriving condition
- Between April August test soil moisture levels and irrigate as per specific task notes
- Tree works or trimming of shrubs should be undertaken outside nesting bird season which is March to August inclusive, unless approved by a suitably experienced ecologist
- Replacement of all failed or damaged planting should be with like-for-like species/specification.

2.3.2 Management - Specific Tasks

Irrigation

Newly planted vegetation, including trees, shrubs, and herbaceous plants, typically have underdeveloped root systems that cannot efficiently access water from deeper soil layers. Consistent irrigation ensures that these roots receive adequate moisture to grow and establish in the soil. Maintaining moisture in the root zone helps new roots expand and anchor the plant securely in the soil. Well-established plants with strong root systems are more resilient to environmental stresses such as drought, extreme temperatures, and pests. Proper irrigation during the first three years of planting establishment ensures long-term health and success of the planting.

- Between April August in periods of no rainfall (1 week without rain), all planted areas of herbaceous planting are to reviewed with a soil moisture reader and as required irrigated using an oscillating sprinkler or rotatory sprinkler for 2hrs twice a week spaced evenly thought the week.
- Irrigate all tree planting through the irrigation tube placing a normally pressured hose pipe on half flow for 5 minutes once a week.

Weeding:

Weeding during plant establishment is essential to ensure that plants have the best possible start by reducing competition, ensuring adequate resources, and minimising potential pest and disease problems. It's a proactive measure that contributes to healthier and more productive plants in the long run.

- Weeding should be undertaken manually every 2 weeks between March August for the first 2 years after planting.
- From the 3rd year onwards, weeding should be undertaken monthly between March - August.

Herbaceous Cut Back:

By autumn many herbaceous perennials are coming to the end of their seasonal growth, with old foliage and flowers beginning to die back, this is when to cut the old foliage back to the ground. The crown (base of the plant) will remain dormant over winter and will produce fresh shoots the following spring. The aims are to:

- Remove dead dying foliage and flowerheads
- Reduce potential damage to the crown and roots through autumn and winter wind rock.
- Reduce potential fungal and disease problems.
- Remove dying foliage allowing new spring foliage and surrounding bulbs to emerge.

Actions:

- Undertake between late autumn and early spring
- Use secateurs to cut away all dead foliage and tidy, cut stems close to the 'crown' or dormant base of the plant. Cut down old flower stems as low as possible and at an angle, so water doesn't collect inside and freeze, damaging the crown. Cut above any new growth at base of clump. Don't cut back perennials with attractive seedheads or stems, such as ornamental grasses, which will add structure and interest over winter and will also provide food and shelter for wildlife, remove these in early spring. Evergreen perennials should not be cut back unless they have significant dead foliage and require regeneration via a cut back.

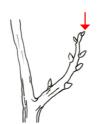
Bulbs Management:

Deadheading bulbs and managing foliage after blooming ensures the health and longevity of the bulbs for future growing seasons.

- Crocus: Do not deadhead or remove foliage. Allow the foliage to die back naturally after flowering.
- Ipheion: Deadhead spent flowers. Allow the foliage to die back naturally after flowering,. Avoid cutting back the foliage until it has turned yellow or brown.
- Narcissus: Wait until the foliage turns yellow before you cut it down, usually about six weeks after flowering finishes. Leaves should be allowed to photosynthesise for as long as possible, so they can fully replenish the energy reserves in the bulb, for a good flowering display the next year.

Pruning Objectives:

The main objectives of pruning trees and shrubs through the scheme is to make sure that branches are well spread to allow in air and light, to build the shape of the tree you require, and in later years to remove any of the 3 'D's (dead, damaged or diseased) wood. Pruning should be carried out in the Winter months between November and February but preferably not when air temperatures are below freezing. Keep tools sharp and disinfect using Jeyes Fluid or similar between each tree.



Prune to an outward Perfect facing bud pruning



it too far

from bud

Cut too close to bud

2

Operation		Мо	Month									Year												
	Annual frequency	Jan	Feb	Mar	Apr	Мау	Jun	lnſ	Aug	Sep	Oct	Nov	Dec		1	2	3	4	5	6	7	8 9	7	10
General Maintenance																								
Weekly site inspections for litter picking across site, remove all litter from site and disposed of at an appropriatly licensed facility	As required																							
Hard landscape areas to be regualrly inspected for unwanted weed growth on main paths, jointing and surfaces to be removed by hand and composted. Moss growth that could make wet timber surfaces slippy should be removed by scrubbing with water and a stiff brush.	12x																							
All paths to be cleared regularly to keep them free of plant material and detritus, where plants are encroaching too much into path a review of the planting should be undertaken.	As required																							
Autumn leaf/branch clearance and plant material to be collected, removed from site and composted.	3x																							
Inspect for signs of invasive and pernicious weed species found in the Weeds Act and Wildlife and Countryside Act. [Japanese knotweed, Giant Hogweed, Himalayan balsam etc.]. If discovered implement an appropriate programme for their treatment and removal according to national regulations and standards.	12x																							
Check furniture, any that becomes dirty to be cleaned down with water and brush. Planting to be pruned back where encroaching over benches. Repair and replace as necessary	12x																							
Check lighting, any that become dirty to be cleaned down with water and brush. Planting to be cut back where encroaching over lighting. Reposition or repair and replace call out as necessary	12x																							
Check handrails and balustrades, any that become dirty to be cleaned down with water and brush. Planting to be cut back where encroaching over handrails or balustrades. Repair and replace as necessary	12x																							
Tree Maintenance																								
Formative pruning, and coppicing where nessesary outside of bird nesting season (see guidance in report).	1x				П									İ										
Apply fertiliser and mulch to newly planted trees	1x																							
Checking of stakes and guys, and re-tighten/ replace/ remove as necessary	2x																							
Irrigate all tree planting through the irrigation tube placing a normally pressured hose pipe on half flow for 5 mins once a week.	As required																						\Box	
Shrub Maintenance																								
Pruning should be undertaken during four periods per year in February/March, June, August and October depending on the individual requirement of the plant species in regard to flowering and habit, etc. Remove all dead wood, diseased tissue, suckers, epicormic growth and old wood from all planted material at the end of each growing season. Shape appropriately to each species, location, season, and stage of growth, leaving a well-balanced natural appearance. Pruned plant material to be removed from site and composted.	4x																							
Weed control to be undertaken by manual hand removal of perennial weeds. Arisings to be removed and either composted on site or properly disposed of as required.	As required																							
Herbaceous Planting Maintenance																								
All newly planted areas to be watered as required during the summer months of years 1-3 as required for planting to thrive, particularly during periods of drought. Between April - August in periods of no rainfall (1 week without rain), all planted areas of herbaceous planting are to reviewed with a soil moisture reader and as required irrigated using an oscillating sprinkler or rotatory sprinkler for 2hrs twice a week spaced evenly thought the week.	As required																							
Prune back all decideous perennial planting to allow new foliage growth (seed heads to be left through winter to provide seasonal interest and habitat benefits for invertebrates)	1x																							
Bi-weekly inspections for weed growth and removal. Weeds to be controlled by hand weeding as necessary. Weeds include self-sown tree saplings	14x																							
Over mature perennials to be sub-divided and thinned out as necessary after year 3 of planting	1x																							
Regular inspections for signs of pests and disease. Plants to be treated as necessary to ensure that they thrive.	12x												П											
Dead plants to be replaced where necessary building on successful species with original planting design.	As required													İ										
Dead-head and tidy bulb planting. Cut back after flowering where they remain visible in surrounding planting (exact timing dependant on species)	As required																							

