

Shell Solihull
Landscape Management Plan



SQUIRES YOUNG
LANDSCAPE ARCHITECTURE

Date | October 2023
Reference | SY23-358-LMP-23-01



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Client:	Shell UK Oil Products Ltd
Location:	Shell Solihull, Warwick Road, Solihull, West Midlands B91 1BB.
Report Title:	Landscape Management Plan
File Reference:	SY23-358-LMP-23-01
Date of Site Visit	04.05.2023
Site Visit Carried Out By:	Francis Squires
Report Author:	Francis Squires

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1.0 Introduction

1.1 It is proposed to seek full planning permission for partial redevelopment at an established Service Station at Shell Solihull, Warwick Road, Solihull, West Midlands B91 1BB

1.2 We have produced a Soft Landscape Plan (SY23-358-LPP-23-01) to detail the proposed new Soft Landscaping works. This document shows our overall design vision for the developed site landscape and provides details of required maintenance operations and any further supervision required.

1.3 Landscape Management Plan Objectives

A Pathway to Achieve the site Biodiversity Objectives

The Landscape Management Plan sets out the pathway for achieving the objectives of the Landscape Proposals to ensure that the project is sustainable and produces a net gain for biodiversity and nature conservation.

1.4 Responsive Management

To achieve the increase in biodiversity, the new habitats and landscape enhancements are to be developed following sustained and management guidelines which allow the management to take account of and respond to the natural processes.

1.5 Appraisal and Review

The Landscape Management Plan is intrinsically flexible.

In addition to specific monitoring, appraisal and feedback at suitable points in the habitat establishment process a Landscape Monitoring Reviews are to be carried out periodically every 5 years to inform and update the Landscape Management Plan.

The success of habitat establishment and diversification will be ascertained and will inform the adaptation of the management guidelines in response to;

- Natural processes, specific site conditions and climate change
- Maximising ecological diversity of the site
- Ensuring the enhancement objectives are achieved

1.6 The Management Plan Period shall be for the Lifetime of the Development

2.0 Site Description

- 2.1 The site is located at Shell Solihull, Warwick Road, Solihull, West Midlands B91 1BB. Ordnance Survey (OS) National Grid Reference SP 13964 80777



Figure 1: Approximate site boundary is indicated by the red line (Source: Google Maps - Not to a specified scale)

- 2.2 The application site lies within the urban area of Solihull and is largely surrounded by residential properties on the main thoroughfare between the Town Centre and Birmingham
- 2.3 The site currently comprises of four pump islands arranged in a starter gate arrangement providing refuelling positions for eight vehicles. The offset fills are located towards the south east of the site with a tanker stand. An existing LPG compound which is now surplus to requirements is positioned in the southern most corner.
- 2.4 The eastern part of the site is landscaped and there are a scattering of trees around the south east and southern boundaries. Between the application site and the adjacent property to the south of the site is a high boundary wall.
- 2.5 The site is not located within a conservation area nor do the trees on the site have TPOs. There are TPO'd trees outside the site to the South and West. The site lies within Flood Zone 1.
- 2.6 The bedrock geology comprises: Sidmouth Mudstone Formation - Mudstone. The soil texture is Loam to Clayey Loam. The soil depth is deep. Past development works means some imported topsoil is likely to be present.

2.7 Photos of site, taken during a site visit on 4th. May 2023.

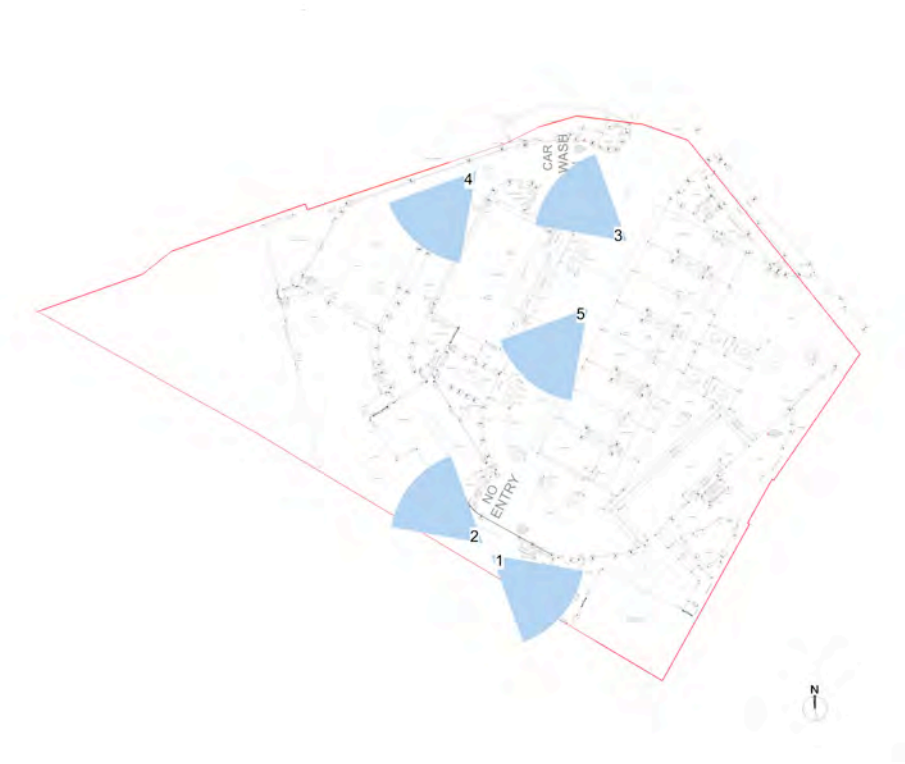


Figure 2: Site plan identifying photo locations



1. View of Southern corner



2. South Western boundary



3. View of Northern corner.



4. View of North Western boundary



5. View towards South Western boundary showing TPO'd Oak T13.

3.0 Landscape Design Objectives

- 3.1 To provide a robust biodiverse planting palette to aid biosecurity, we are aware of the recommendations by Professor Paula Shrewsbury and Professor Michael J. Raupp of the University of Maryland that we should 'Use native and non-native plants to enhance ecosystem services-alternative resources for pollinators and natural enemies-more flowering plants', in conversation Professor Raupp stated that plants flowering later in the season were particularly important and that to increase biosecurity schemes consisting of completely native planting should, where possible, be avoided.
- 3.2 Promote continuity of the design concept and effects.
- 3.3 To provide both nesting and food resources for both invertebrates and vertebrates.
- 3.4 To specify an easily maintained planting scheme that provides all year round interest and includes a strong evergreen framework.
- 3.5 To include an area of Perennial Meadow grass to enhance biodiversity.
- 3.6 To include both native and non-native trees in our proposed planting scheme and optimize their contribution to the sites tree cover, character, and amenity.
- 3.7 To retain existing tree and shrub plantings where appropriate.
- 3.8 To promote satisfactory establishment and development towards maturity of the specified trees and shrubs.
- 3.9 To provide protection and better growing conditions for the retained and new trees.
- 3.10 The objectives for the management of the new hedge:
 - To ensure satisfactory establishment of new hedge
 - To maintain in a healthy and attractive condition
 - To maintain structure and density
- 3.11 To use environmentally friendly materials for the example the use of 'Naturetile' biodegradable tree tie material rather than plastic ties.
- 3.12 For Biosecurity plants will be sourced as British grown, nursery trees and shrubs and with local provenance where possible, avoiding directly imported stock to reduce risk of introduction of pests and diseases.

4.0 Design Development and Plant Selection Details

- 4.1 Our report SY23-358-ARB-23-01 shows that the proposed works will allow for increased landscaped areas between the new shop and street improving the Streetview.
The removal of the LPG tank in the Southern corner allows for planting to aid tree diversity.
- 4.2 The planting of a bed of Acer Campestre to the Northern corner aids screening.
- 4.3 The planting of one Ulmus 'Lobel' in the Southern corner of the site increases diversity. A large, fast growing tree of narrowly upright habit. It is very wind-resistant and suitable for planting close to buildings. Selected for its resistant to Dutch Elm disease - *Hillier Manual of Trees and Shrubs*. Large and fast growing this narrow columnar tree eventually becomes broader. It will withstand exposed locations, including those on coasts, and is also good for avenues and verges. Ulmus 'Lobel' has been very successfully planted throughout the UK - *Barcham Time for Trees Edition 04*



Figure 3: Example of Ulmus 'Lobel'

- 4.4 We have specified planting of two *Crataegus x prunifolia* 'Splendens' - It is a great tree for wildlife with birds especially benefiting from the abundant autumn crop of shiny red berries. This much underused tree requires little maintenance after establishment - *Barcham Time for Trees Edition 04*.
An excellent small compact broad headed tree leaves colour richly in autumn - *Hilliers Manual of Trees and Shrubs*



Figure 4: Example of *Crataegus x 'Prunifolia Splendens'* (Cockspur Thorn)

- 4.5 We have specified three new trees to be *Betula ut. jac* 'Doorenbos' multi-stem, a medium sized tree with striking, white, peeling bark, pale orange when freshly exposed - Hillier Manual of Trees and Shrubs. Spectacular when grown as a multi-stem - Barcham Time for Trees Edition 04. These reference the existing Weeping Birch and provide screening to the new building.



Figure 5: Example of Betula ut. jac 'Doorenbos' multi-stem

4.6 Creation of perennial meadow areas



Figure 6: View of current grass cutting regime on site

- 4.7 As seen in the image above the current mowing régimes of short cut grass creates a 'sterile' effect.
- 4.8 We therefore propose a change to the grass cutting regime to allow the development of Perennial Meadow, which is both more attractive and which aids biodiversity.
- 4.9 We do not propose resowing of the existing areas but hope to achieve a more gradual transition to Perennial Meadow by change of grass cutting regime.
- 4.10 We have specified a new area of Perennial Meadow grass to be established as follows
- 4.11 Where the new Perennial Meadow area lies over existing concrete surface, the concrete can be removed but the sub-base can remain in place (expected depth 150mm).
- 4.12 In areas to be sown with perennial grass seed sub-soil from the on-site excavations should be spread to 150mm deep.
- 4.13 This sub-soil should be cultivated to a medium tilth and rolled or trodden on to produce a firm surface.
- 4.14 The seed *Special General Purpose Meadow Mixture EM3* should be sown when there is sufficient warmth and moisture. The seed should be broadcast by hand or applied by machine at 4g/m² and trodden in.
- 4.15 No fertiliser should be applied.

- 4.16 Mow the newly sown meadow grass regularly in the first year of establishment to a height of 40-60mm removing all arisings.
- 4.17 In the following years a Spring cutting in March can be carried out if deemed necessary, the mower should be set high (70-100mm).
- 4.18 Weed out or spot treat perennial weeds that appear
- 4.19 Cutting in late July to height of 40-70mm removing all cuttings.
- 4.20 An additional late Summer to Autumn cut can take place if required.
- 4.21 *Special General Purpose Meadow Mixture EM3*

Wild Flowers

%	Latin name	Common name
	Agrimonia eupatoria	Agrimony
	Anthyllis vulneraria	Kidney Vetch
	Carex flacca	Glaucous Sedge
	Centurea scabiosa	Greater Knapweed
	Chaerophyllum temulum	Rough Chervil
	Daucus carota	Wild Carrot
	Filipenula ulmaria	Meadowsweet
	Filipendula vulgaris	Dropwort
	Galium verum	Lady's Bedstraw
	Knautia arvensis	Field Scabious
	Leucanthemum vulgare	Oxeye Daisy
	Lotus corniculatus	Birdsfoot Trefoil
	Malva moschata	Musk Mallow
	Plantago lanceolata	Ribwort Plantain
	Primula veris	Cowslip
	Ranunculus acris	Meadow Buttercup
	Rhinanthus minor	Yellow Rattle
	Rumex acetosella	Sheep's Sorrel
	Scabiosa columbaria	Small Scabious
	Silene latifolia	White Champion
	Trifolium pratense	Wild Red Clover

20

Grasses

%	Latin name	Common name
8	Agrostis capillaris	Common Bent
32	Cynosurus cristatus	Crested Dogstail
24	Festuca Rubra	Red Fescue
16	Poa pratensis	Smooth-stalked Meadow-grass
80		

5.0 Site Specific Pruning Works

- 5.1 Pruning works to the off site Leyland Cypress should be carried out during July. This is during the bird nesting period, generally accepted as being between 1st. March to mid August but local variations are possible so the hedge should be checked for nests before commencing works. If works are programmed outside this period a Risk Assessment must be carried out by a qualified person to check for nests.
- 5.2 The retained Weeping Birch and Pines should not need any regular pruning works.
- 5.3 The proposed new trees should require no regular pruning.
- 5.4 The Acer campestre planting should be kept to 2m tall. Pruning should be carried out in the winter period.
- 5.5 Hedge pruning should be carried out to an 'A' shape or flat topped 'A' shape. Pruning with vertical sides should be avoided.

6.0 Maintenance Notes

- 6.1 To be carried out by the Landscape Contractor and thereafter by the appointed maintenance team.
- 6.2 **Watering:** Carry out weekly watering during the growing season (April to Oct inclusive) – All the new trees will need approx. 35 litres per week, adjusting for weather conditions
During periods of reduced rainfall all new planting should be irrigated to maintain a moist and healthy root zone. This shall be carried out by hand from a bowser or by hose from permitted water points.
- 6.3 **Weed Control:** All areas of planting must be kept weed free. Inspect mulches on each visit and maintain to a depth of 70mm thereby assisting water retention and suppressing weed growth. Herbicide use should be kept to a minimum particularly in areas of ground cover which should be weeded by hand
- 6.4 **Tree Support:** Check for any sign of wind rocking, frost heave, settlement or human interference and ensure that trees remain stable and secure.
- 6.5 **Pruning of Shrubs:** Little pruning of shrubs should be required in the establishment period and after as follows. However any aberrant, uncharacteristic or reverted growth should be removed and all pathways, roadsides and sight lines kept clear.
- 6.6 **Protection of Planting:** Visits should be used to observe and where appropriate obstruct any desire paths that may appear or alternatively manage them in a constructive way. Also areas that show wear or erosion at the periphery should be restored and if required protected by temporary fencing.
- 6.7 **Pests and Diseases:** On each visit inspect for any sign of disease, pest infestation or damage by vermin and take appropriate control measures if required.
- 6.8 **Litter:** Litter picking in both planted areas and hard surfaces should be carried out on each visit.
- 6.9 **Plant Failures:** On each visit note should be taken of any dead or missing plants and these replaced before the end of the current year for a five year period.

7.0 General Specification for Landscape Works

- 7.1 All works to be carried out in accordance with the recommendations of the British Standards Institution.
- 7.2 BS 3936 : 1992 Specification for Nursery Stock.
- 7.3 BS 4428 : 1989 Code of practice for general landscape operations (excluding hard surfaces)
- 7.4 BS 3882 : 2015 Specification for Topsoil
- 7.5 BS 8545 : 2014 Trees: From nursery to independence in the landscape – Recommendations
- 7.6 BS 5837 : 2012 Trees in relation to design, demolition and construction – Recommendations
- 7.7 BS 3998: 2010 Tree work – Recommendations
- 7.8 All plants shall be carefully packed and protected when transporting them to the site. If branches, shoots or roots suffer minor damage they shall be carefully pruned. Plants shall be lifted and handled with care to avoid damage to roots and shoots. They shall be substantially free from pests and diseases. Torn or lacerated roots shall be pruned before despatch.
- 7.9 Plant delivery and storage must be in accordance with the recommendations of the National Plant Specification for plant handling as an absolute minimum. All plant material must be protected from physical damage, extremes of temperature, wind and drying out. Keep the root zone of all Container Grown Plants moist at all times through regular watering from the time that the plant material is received from the supplier.

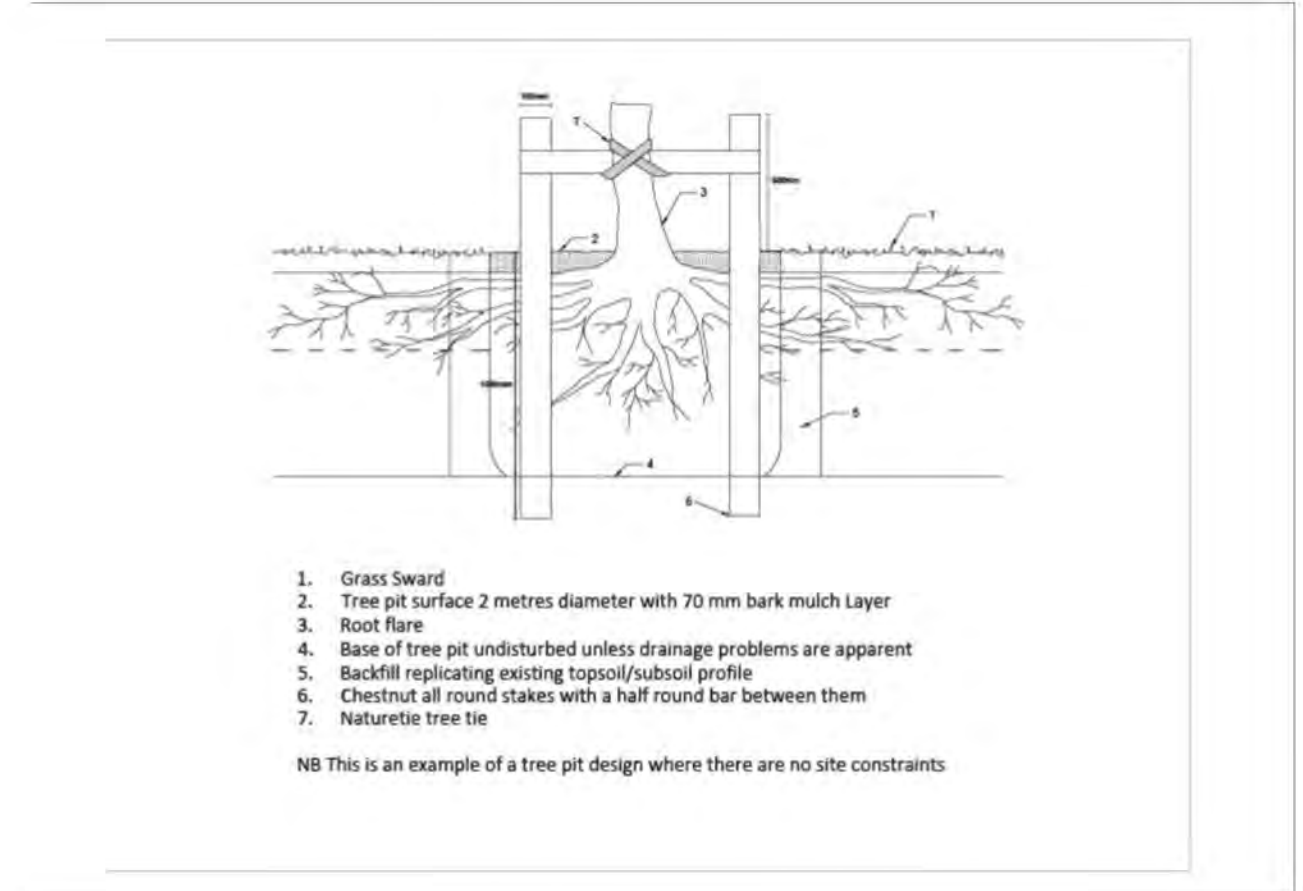
Landscape Maintenance

It is the responsibility of the site owners to ensure that the Landscape Maintenance is carried out as detailed in the following notes for the life of the development. The following notes relate to the maintenance of the soft landscaping areas as it may be that maintenance of the hard surfacing may not be the responsibility of the Landscape Contractor. If this is the case the contractor responsible for the hard surface maintenance should be advised that the use of residual herbicide is not acceptable. Hard surfaces can be kept weed free by mechanical means and, if necessary, the use of herbicides. During the five year period annual visits by the implementing Landscape Architect should be made to check that all maintenance works are being carried out properly and as detailed.

Frequency of visits

December/January/February/March – 1 visit each month.
 April – November – 2 visits each month.
 This schedule of visits may need to be altered if any period of extreme weather occurs such as drought, excessive rain or high wind.
 Further maintenance years 2 – 5
 Maintenance during this period should be as detailed for the establishment period with the following additional details:

- Fertiliser application
 Years two, four: all trees to be given the following rate of Granulated sugar:
 3 grammes per litre per square metre of crown spread
 Years three, five: all planted areas to be fertilised with Sierrablen Flora granular fertiliser at 70g/square metre
 After this period the fertilising regime should be reassessed by the Landscape Architect
- Pruning of plants**
 All pruning should be carried out to maintain the natural shape and form of plants and pruning to 'box' shapes should be avoided.



Existing planting retained

Perennial meadow grass.
 New grassed areas should be cultivated and have the soil raked to a medium till and sown with Emorsgate EM3 Meadow Mixture at a rate of 4g/m² and then trodden in.
 Year 1
 Mow the newly sown meadow grass regularly in the first year of establishment to a height of 40-60mm removing all arisings.
 Year 2 - 5
 Spring cutting in March can be carried out if deemed necessary, the mower should be set high (70-100mm).
 Weed out or spot treat any perennial weeds which appear.
 Cut in late July to a height of 40-70 mm. removing all cuttings.
 Remember to remove all cuttings to gradually reduce the soil fertility and to avoid leaving a thatch which will inhibit the growth of next years flowers.
 An additional late Summer to Autumn cut can take place if required.
No fertiliser should be applied

Trees to be planted in positions shown:

CP Crataegus x p. 'Splendens' 12-14 45l (Barchams/I Tree Carbon credit score rating C)
 UL Ulmus 'Lobel' 12-14 45l (Credit score A)
 BJ Betula ut. jac Doorenbos multi-stem 2.0-2.5m 45L (Credit score B)

Trees to be supplied by Barcham Trees or alternative UK supplier with similar biosecurity protocols also with Plant Healthy Certificate of Conformity

Thoroughly water each tree on completion of planting to expel air pockets and to settle soil around roots.
 Apply at the following rates:
 50 litres per tree.
 The existing topsoil should be used for tree planting with 2.5kg Carbon Gold Tree Soil Improver (BioChar) per tree.

Indigenous Shrub planting:

AC Acer campestre 60-90 5l or OG 1/sq.m

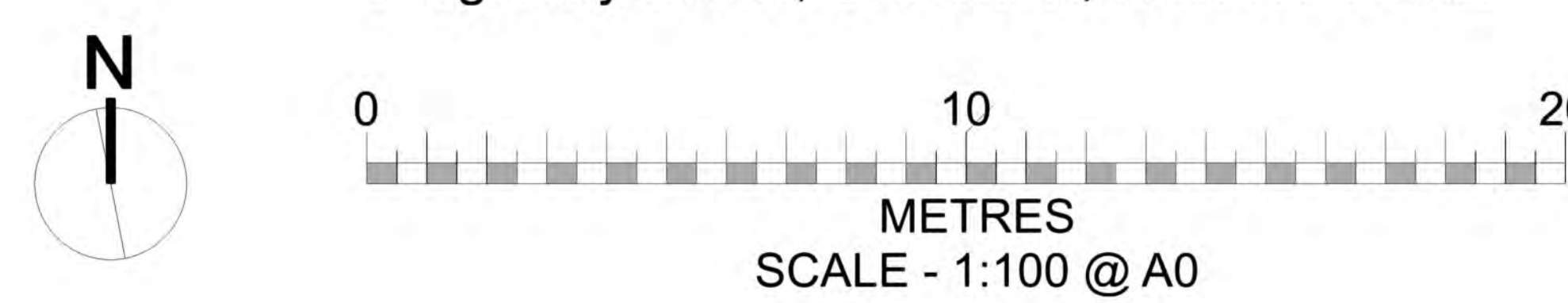
All planted areas to be mulched with 70mm of bark mulch

The original of this drawing was produced in colour – a monochrome copy should not be relied upon.

Project	Shell Solihull
Title	Landscape Planting Plan
Scale	1-100 @ A0
Dwg No.	SY23-358-LPP-23-01
Date	17.11.23
Revision	0
Revision Date	



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General Reference Documents:

British Standards Institution
 BS 3936 : Specification for Nursery Stock.
 BS 4428 : 1989 Code of practice for general landscape operations (excluding hard surfaces)
 BS 3882 : 2015 Specification for topsoil.
 BS 8545 : 2014 Trees: from nursery to independence in the landscape - Recommendations
 BS 5837 : 2012 Trees in relation to design, demolition and construction - Recommendations
 BS 3998: 2010 Tree work - Recommendations
 All works to be carried out in accordance with the recommendations of the British Standards shown above.

Soft Landscape Maintenance Details for Shell Solihull

Establishment Period – 12 months from Practical Completion
 To be carried out by the Landscape Contractor and thereafter by the appointed maintenance team.

Watering Carry out weekly watering during the growing season (April to Oct inclusive) – All the new trees will need approx. 35 litres per week, adjusting for weather conditions. During periods of reduced rainfall all new planting should be irrigated to maintain a moist and healthy root zone. This shall be carried out by hand from a bowser or by hose from permitted water points.

Weed Control All areas of planting must be kept weed free. Inspect mulches on each visit and maintain to a depth of 70mm thereby assisting water retention and suppressing weed growth. Herbicide use should be kept to a minimum particularly in areas of ground cover which should be weeded by hand.

Tree support Check for any sign of wind rocking, frost heave, settlement or human interference and ensure that trees remain stable and secure.

Pruning of shrubs Little pruning of shrubs should be required in the establishment period and after as follows. However any aberrant, uncharacteristic or reverted growth should be removed and all pathways, roadsides and sight lines kept clear.

Protection of planting Visits should be used to observe and where appropriate obstruct any desire paths that may appear or alternatively manage them in a constructive way. Also areas that show wear or erosion at the periphery should be restored and if required protected by temporary fencing.

Pests and Diseases On each visit inspect for any sign of disease, pest infestation or damage by vermin and take appropriate control measures if required.

Litter Litter picking in both planted areas and hard surfaces should be carried out on each visit.

Plant failures On each visit note should be taken of any dead or missing plants and these replaced before the end of the current year for a five year period.

Grass cutting As detailed opposite.

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