

Landscape Management and Maintenance Plan

For Residential Development on Land off Mill Lane, Wetley Rocks, Stoke on Trent, Staffordshire ST9 0BN

1.0 INTRODUCTION

Purpose and Scope

1.1 The Landscape Management and Maintenance Plan is part of a standard requirement for the planning application process and relate to the management proposals for landscape areas which are part of this proposed development.

1.2 The Plan shall be taken to include this document and any supporting plans, reports and specifications approved as for this proposed residential development.

This includes any documentation containing quantitative and qualitative information about the external areas of the site that will be useful to those responsible for managing and maintaining them.

1.3 The Management Plan sets out the aims and objectives for the site along with each landscape component, and the associated maintenance works required on an Annual and Occasional basis.

Annual Works are those works that will be required every year, such as watering, weeding and cleaning.

Occasional Works are those that will be required on an irregular or cyclical basis, such as repairs and renewals.

2.0 SITE INFORMATION AND INTRODUCTION

Landscape Works and Types Summary

Summary description of external landscape treatments, areas and components

Soft Landscape Areas include the following elements:

- Amenity grass and lawn areas;
- Groundcover and shrub planting;
- Tree planting;
- Hedge planting;

Hard Landscape Areas include the following elements:

- Walls and copings;
- Fencing and boundary provision;
- Lighting;

Management Plan Objectives

2.1 The aim of the Management Plan is to coordinate a high standard for maintenance and management of landscape elements across the site to ensure successful visual integration of the development proposal into the surroundings and to enhance nature conservation interests in accordance with the design objectives.

This includes the appropriate maintenance of the proposed landscape components within an easily maintained landscape framework that can provide (where possible) a diversity of landscape experiences for the users, residents and visitors.

2.2 The objectives are summarised as follows:

- a. To ensure a high standard of sustainable management of all landscape areas in a neat, tidy and substantially weed free condition;
- b. To ensure that all seeded areas are established and maintained in a condition that contributes to the visual amenity of the development;
- c. To establish and maintain tree and shrub planting to provide an overall landscape framework and landscape character;
- d. To maintain and enhance biodiversity and fulfil all legal requirements in relation to the protection and management of ecological features and the protection and management of protected species
- e. To ensure health and safety to minimise risk of injury and damage to people and property;
- f. To provide a mechanism or monitoring and review with practices reviewed on an annual basis in accordance with changing site circumstances.

2.3 There will be a five-year guarantee after construction that all the proposed planting works still exist and is established in line with landscape design expectations.

This is just to make sure that no planting has been removed or damaged due to the subsequent construction or plant failure.

2.4 If removal of any tree is necessary, agreement shall be reached with the Council as to replacement with matching or appropriate species in the next planting season.

Landscape Specifications

2.5 Landscape works to be undertaken by an approved landscape contractor and in accordance with BS 4428:1989 Code of practice for general landscape operations (excluding hard surfaces).

The general landscape proposals are indicated on Drawing number 2023-2796-02 Rev C

2.6 When using pesticides, the Contractor shall take the appropriate safety precautions

2.7 Plant supply shall be obtained from a nursery that are members of the Horticultural Trades Association Nursery Certification Scheme.

2.8 All planting stock shall be of local provenance or if unavailable national provenance.

Ground Preparation

2.9 Prior to cultivation, planted areas shall be cleared of all loose debris, rubbish, stones over 25mm in diameter, roots, and other extraneous matter. Grass and weeds shall be sprayed with 'Glyphosate' or similar approved herbicide.

2.10 Topsoil Depths: spread over prepared subsoil in layers not exceeding 150 mm, each layer firmed before spreading the next.

Topsoils shall comply with multipurpose grade within BS 3882:2015: Specification for Top Soil.

Overall minimum depths after firming and settlement to be: -

- Shrub / Hedgerow areas 500 mm
- Lawn and Grass areas 150mm

2.11 Planted areas to be cultivated to a depth of 300mm by hand or rotovator, incorporating planting compost, soil improver and fertilizer base dressing of the types. The topsoil shall have been reduced to a fine tilth on completion of the cultivation works.

Timetable for Landscape Works

2.12 The landscape works shall be undertaken by the end of the next available planting season and during the following periods:

- Deciduous trees and shrubs: Late October to late March;
- Conifers and evergreens: September/ October or April/ May; and
- Container grown plants: At any time if ground and weather conditions are favourable.

Proposed Standard Tree Planting

2.13 Tree supply and planting shall correspond to BS 8545:2014 Trees: from nursery to independence in the landscape. Planting of trees shall be undertaken in favourable weather conditions between October 31st to March 31st.

2.14 Tree pits shall be excavated to suitable dimensions to accommodate roots or root-balls or baskets with bases and sides broken up to a minimum depth of 150mm to assist drainage and root penetration. Any unsuitable material such as large clay lumps, bricks, concrete, timber and sand shall be removed off-site.

All tree pits shall be backfilled, after planting, with a 3:1 volume mixture of topsoil and mulching compost/manure or similar approved.

2.15 The planted trees shall be full and well-shaped with crowns thinned by 30% according to good horticultural practice and in a manner that does not affect the overall stature, structure or good appearance of the tree.

All work shall conform to a minimum standard as set out in BS 4043:1989 Recommendations for transplanting root-balled trees.

Proposed Shrub and Groundcover Planting

2.16. Transplants and container grown shrubs shall be of the size stated and conform to BS 3936 - Part 1: Nursery stock specification for trees and shrubs.

2.17 Planting pockets 400x400x300mm deep with cultivated 100mm layer over area of pit, fertiliser 35g. 75mm depth bark mulch dressing on completion of planting.

Hedgerow Planting

2.18 Hedgerow plants to be planted at 6 per linear metre (in double staggered row at 300mm centres). Transplants shall be of the size stated, shall conform to BS 3936 - Part 1: Nursery stock specification for trees and shrubs.

2.19 Planting pockets 300x300x300mm deep with cultivated and evenly incorporated: organic manure 100mm layer over area of pit, fertiliser 35g. 50mm depth bark mulch dressing on completion of planting.

Grass Turf

2.20 Grass turfing to lawn areas to be supplied by member of Turfgrass Growers Association to BS 3669, free from undesirable grasses and weeds.

Grade - Fine Sports/Ornamental.

Herbicide treatment to be applied not more than 3 months or not less than 4 weeks before lifting.

Do not use dry or deteriorated turf. Stacking height to be a maximum of 1000mm.

Break up compacted soil to full depth add conditioner/fertilizer in accordance with manufacturer's instructions, reduce topsoil to a tilth to a depth of 200mm.

Remove stones or clay greater than 50mm in any dimension.

Remove rubbish, roots and debris. Prior to cultivation apply compost dressing to PAS 100 to include minimum 25% organic matter and 35-55% moisture content, Carbon:Nitrogen ratio maximum 20:1.

Turf to be laid within 18 hours of delivery in spring and summer and within 24 hours in autumn and winter.

Do not lay turf in persistent cold winds, or on frost bound or waterlogged soil. Lay planks on previously laid turf for access. Do not walk on turf or prepared bed. Joints to be well butted up, do not stretch turf. Remove any high spots and fill hollows with fine sand.

Consolidate lightly and firmly as laying proceeds.

Dressing to be brushed in well to completely fill joints.

Thoroughly water the finished turf immediately, check water has penetrated soil beneath.

3.0 LANDSCAPE SOFTWORKS – ESTABLISHMENT MAINTENANCE

General Introduction

3.1 Establishment maintenance will form part of the landscape contractors works.

The period of establishment maintenance will be 12 months after the completion of the planting and grassing works prior to handover.

3.2 Prior to handing over, all plants deaths shall be replaced, and all defects made good.

Establishment Maintenance Operations – Amenity Grass Areas

3.3 The developer and contractor shall be responsible for maintaining all grassed areas in a neat and tidy, weed free and litter free condition, throughout the complete growing season, or when the landscape works are completed, whichever is the later.

Subsequent and Management

3.4 Grass shall be cut regularly (a total of 12-16 times during the growth season) to a length consistent with the season and quality of growth. The normal establishment of cut shall be 25mm.

All arisings shall be removed if the height of the grass exceeds 100mm prior to cutting

3.5 Any areas of settlement or local depressions shall be made up and re-sown by the contractor at his own expense.

3.6 The edges of seeded areas, adjacent to shrub beds and margins are to be carefully trimmed square and to a true line. The contractor should note that this also applies to the area around the base of trees planted in grass areas.

3.7 All areas of failed grass shall be reinstated using the seed mix as specified within the landscape contract, with ground cultivation prior to seeding meeting the same requirements.

3.8 All new grass areas shall be handed over as complete well-established sward at the end of the establishment maintenance period.

Establishment Maintenance Operations – Planting operations

3.9 Weed Control: All planted areas shall be kept entirely weed free throughout the establishment maintenance period, using approved residual and translocated herbicides, or mechanical means, or a combination of both.

3.10 Wind Firming: All plants shall be inspected at monthly intervals for wind firmness, and re-firmed as necessary.

3.11 Stakes & Tree Ties Checking:

Stakes shall be checked monthly for firmness, and re-firmed as necessary, and all tree and plant ties inspected and loosened as required.

3.12 Pruning:

Shall be carried out on a monthly basis and will include the removal of minor dead wood or damaged wood. Formative pruning shall be undertaken at the appropriate time of the year for the species involved in order to enhance the plants best feature e.g., flowering, stem colour etc.

3.13 Inorganic Fertilizer: All shrub-planting areas shall receive a fertilizer top dressing in July of 'Osmocote' slow-release fertilizer to be lightly raked in.

3.14 Watering: All plants shall be watered as required during the establishment maintenance period to ensure survival of all plant material.

3.15 Litter Removal: Litter that may have accumulated in grass and planted areas must be lifted and removed from the site each month.

3.16 Failed Planting Areas:

Any plant material which has failed to establish, or has died, throughout this period must be replaced with healthy plant stock of similar specification at the contractor's own expense. Successfully established plant material shall be those plants showing positive signs of growth i.e., shoot extension and growth over time. Breaking into leaf is not to be taken as evidence of successful establishment.

3.17 Handover of Planted Areas: All newly planted areas shall be handed over as complete and well established at the end of the establishment maintenance period.

4.0 LANDSCAPE SOFTWARES – LONG TERM MANAGEMENT

Grass Areas

4.1 Performance Criteria: Grassed areas shall have good grass cover without obvious bare patches.

4.2 Maintenance Objectives: To establish and maintain an even cover of grass sward.

Maintenance Operations Years 1 – 20

- Grass Cutting: All grassed areas will be maintained between 20 – 40mm in height during April to August inclusive and between 30 – 50mm at all other times;
- Frequency of cuts may be up to 20 cuts per annum, dependent on the length of the growing season and weather, with the majority undertaken during the spring and summer months. Clippings may be let fly, but all adjacent hard surfaces shall be swept clean after cutting with all clippings removed to contractor's tip;
- Grass Verges & Edges: All edges to grassed areas against buildings, footpaths, roadways, trees and any other obstruction shall be kept neat and tidy. Border edges shall be clipped and not exceed 50mm length at any time;
- Weeding: Spot weeding of isolated areas of weed infestation may be undertaken using an approved selective herbicide; and
- Reinstatement of failed areas: All areas of failed grass shall be reinstated using the seed mix as specified within the original landscape contract, with ground cultivation prior to seeding meeting the same requirements.

Groundcover and Shrub Planting Areas

4.3 Performance Criteria: By year 5 all ground cover planting shall have achieved closed canopy and shall have been thinned and pruned.

4.4 Maintenance Objectives: To establish and maintain a weed free cover of healthy growth, clipped or pruned as necessary to give a neat and tidy finish contained within the planted area.

Maintenance Operations Years 1 – 3

- Monthly inspection for wind firming and watering to establish good growth;
- Annual application of an approved fertilizer in July at a rate of 30g/M²; and
- Remove and replace all dead, dying and diseased or vandalized plant material, replacements to be as originally specified within the main landscape specification.

Maintenance Operations Years 3 – 5

- Annual application of an approved residual herbicide in the winter months, with removal or spot treatment with an approved translocated herbicide during the main growing season;
- In the appropriate season for the species involved, prune and tidy the plants removing dead, dying or diseased plant material;
- Selectively thin plants that are restricting the natural and attractive development of their neighbours; and
- Remove all arising from site.

Maintenance Operations Years 5 – 20

Operations to include the above, plus:

- Bi – annually prune and tidy the plants removing all dead, dying or diseased plant material from the site; and
- Replace as necessary all shrubs that are not contributing satisfactorily to overall objectives of the landscape management plan.
- Replacements shall be approved with the supervising officer.

Hedgerows

4.5 Performance Criteria: All hedges shall have a complete canopy and be managed to form a continuous impenetrable thicket to the desired height by year 5.

Maintenance Operations Years 1 – 3

- Monthly inspection for wind firming and watering as required ensuring establishment and survival of plant material;
- Pruning shall be directed at maintaining true and even levels as necessary during the growing season, with all arisings removed from site;
- The first cut can commence when all danger of frost has receded. When cutting avoid strong sunlight, best carried out on a dull and wet day;
- The last cut shall commence no later than 4 weeks before the first frost. Annual application of an approved fertilizer in July at a rate of 30g/M²;
- an approved residual herbicide in the winter months and spot treatment with an approval translocated herbicide during the growing season; and
- Remove and replace all dead, dying, diseased or damaged plant material, replacements to be as originally specified within the main landscape contract, or as agreed with management company representative.

Maintenance Operations Years 3-20

Operations to include the above, plus:

- Maintain top and side of hedges in a rectangular profile using suitable, approved mechanical methods, to true and even levels. Remove any cuttings lodged in the surface of the hedge and rake up and remove all arisings; and
- Maintain weeds or grass growth at the base of the hedge to a maximum height of 100mm by regular hand cutting or by application of an approved residual herbicide.

Standard Tree Planting

4.6 Performance Criteria: To provide a healthy growing tree that contributes to the overall aesthetics of the landscape.

4.7 Maintenance Objectives: To ensure establishment and maintenance of trees with a well-shaped habit.

Maintenance Operations Years 1 – 3

Monthly inspection for wind firming and watering as required ensuring establishment and survival of plant material (fortnightly during dry spells);

- Bi-monthly tree tie check to ensure that the trees are not being strangled by support. Loosening of trees ties as necessary;
- Maintain a 1m diameter area of weed free soil around the base of each tree by hand. This to be carried out monthly during the main growing season and bi-monthly thereafter;
- Annual application of an approved fertilizer in July at a rate of 60g/tree;
- Remove and replace all dead, dying, diseased or damaged plant material, replacements to be as originally specified within the main landscape contract, or as agreed with the supervising officer;
- Prune the trees to remove any dead, dying or diseased shoots and limbs to create a balanced form for future growth, remove; and
- Tree Guards and Grilles: Where supplied and fitted, tree guards (mild steel and 'Weldmesh') are to be inspected, re-fixed or replaced as necessary to original specification and to prevent chaffing of tree.

Maintenance Operations Years 3-5

Operations to include the above, plus:

- Removal of tree stakes, tree ties and tree guards as necessary, as trees become wind firm and established to prevent strangulation of tree.

Maintenance Operations Years 5-20

Operations to include the above, plus:

- Some selective thinning of tree groups may be required during this period, at years 10 and 20;
- Visibility Splays: Any vegetation other than grass on visibility splays or road sight lines will be kept to below 600mm above channel lines on road. In addition, the visibility splay will be kept free of all structures or vegetation other than that approved in the planning consent.

Watering

4.8 In any period of extended drought ensure survival of all plants by provision of watering.

Monitoring Objectives and Performance Criteria

4.9 The landscape contractor with responsibility for the site shall record site visits, maintenance operations undertaken and any other significant events.

This information shall be used to prepare an annual report at the end of each year that will summarize maintenance operations together with an assessment by the contractor of the current state of the site.

4.10 The appointed officer shall prepare a long-term review after years 5, 10, 15 and 20. This report shall summarize the management undertaken together with an assessment of the performance of the landscaped areas. This review shall include recommendations for improving the management plan, if necessary, dependant on findings.

5.0 LANDSCAPE HARDWORKS – LONG TERM MANAGEMENT

Paved Areas

5.1 Performance Criteria: All hard surface areas shall remain in good repair and free of any trip hazards.

5.2 Maintenance Objectives: To repair any sunken/raised paving elements, making good damaged units or subsistence to match original materials and retain the paved areas in clean condition.

Maintenance Operations

- Annual inspections of hard surface areas and maintenance carried out as necessary
- Sweep with pedestrian equipment and dispose arisings
- Apply herbicide, weed wipe.
- Clean paved surfaces.

6.0 GENERAL SUMMARY

6.1 All works, materials and operations will be in accordance with relevant legislation, British Standards, Regulations (including the CDM Regulations) and Codes of Practice.

6.2 Specialist Contractors may be used on an as needs basis to complete specialist operations and/or occasional works.

Process for Monitoring and Review

6.3 The Landscape Management Plan and maintenance schedules will be monitored and assessed for their effectiveness on an annual basis for the first five years following the completion of the development.

The review will include advice from specialist consultants as required (such as a qualified arboriculturist and ecologist) with a site visit to assess landscape components, condition, and need for any required mitigation or enhancement;

6.4 The report shall include a brief summary of the preceding period of the management plan together with an assessment of the performance of the landscape areas against the performance criteria stated in this plan.

The review shall also include recommendation for future maintenance including potential remedial or enhancement works.

Five Year Review

6.5 The Landscape Management Plan will be reviewed every five years, or as required to ensure the satisfactory management of the landscape in perpetuity.

7.0 Specifications for Replacements - Post planting

Plant Material Generally

- Trees, shrubs, and other plant materials as specified on the drawing shall be supplied from an approved source. Landscape products will be obtained from sustainable sources and from suppliers committed to sustainability.
- All trees and shrubs shall correspond exactly with the species, varieties and sizes shown on the planting plan, and shall comply with the relevant sections of BS 3936 - Part 1: Nursery stock specification for trees and shrubs.
- All shrubs, hedging plants, whips, feathered whips and climbing plants shall be properly grown, healthy, well established nursery transplants of good form, stock & strain, and shall have a well-developed fibrous root system.

Trees

- All trees shall have a well – balanced crown with an established framework of branches consistent with the species, a single straight stem and a well-developed fibrous rooting system.
- Bare rooted trees, where specified shall conform to the above.
- Root-balled trees, where specified shall be supplied with a root-ball of diameter and depth appropriate to the size and species of the tree. The minimum diameter shall be no less than ten times the diameter of the stem measured at 300mm above ground level. The root-ball shall be thoroughly moistened, prior to lifting from the nursery.