

STRATHMORE CENTRE, TEDDINGTON

LANDSCAPE MANAGEMENT AND MAINTENANCE PLAN



Written by:	SR
Checked by:	HCS
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Revision	Date	Details	Revised
A	14.09.20	Layout changes	HCS

1.0 Objectives

- 1.1. To ensure the successful planting operations, establishment and continued healthy growth through to maturity of the trees, shrubs and grass.
- 1.2. To achieve a clean, tidy condition and appearance of all external areas.
- 1.3. To ensure that the development provides biodiversity enhancements.

2.0 Background Information

- 2.1. ACD Environmental were commissioned in 2020 to prepare the following documentation:
 - Soft Landscape Proposals
 - Hard Landscape Proposals
 - Soft Landscape Specification
- 2.2. The controlling authority are London Borough of Richmond Upon Thames, who should be consulted on any matters relating to existing trees and the approved ACD detailed landscape proposals for the project.

London Borough of Richmond Upon Thames,

Civic Centre,

44 York Street,

Twickenham,

TW1 3BZ.

3.0 Preliminaries

- 3.1. Failures of Plants (Pre-practical Completion): the Contractor entirely at his own cost shall replace any trees, shrubs or other plants other than those found to be missing or maliciously damaged.
- 3.2. Malicious Damage or Theft prior to Practical Completion: the Contractor at his own expense shall make all loss or damage arising from theft or malicious damage prior to practical completion of the entire project good.
- 3.3. Post Practical Completion: the Contractor will carry out the maintenance of trees, shrubs and grasslands after the date of practical completion until the responsibility is transferred to the new owners or by the appointed Management Company.
- 3.4. Replacement of plants shall take place as many times as is necessary in order to maintain a complete cover of plants and to maintain the scheme as designed by the Architect, and within the correct season for the type of plant, tree, shrub and grassland mix.

4.0 General Maintenance

4.1. Following installation and after transfer the landscape shall be the responsibility of and maintained in perpetuity by:

- PA Housing and their appointed Management Companies (should these be contracted out),
- SCAMPS and their appointed Management Company,

The agreement for which shall be set up by the Developer, who shall confirm in writing to the Principal Planning Officer of London Borough of Richmond Upon Thames when the maintenance agreement is completed and is operative.

Refer to ACD drawing LIV22443-50 Landscape Maintenance Plan for an overview of the responsible parties for the landscaped areas.

4.2. The Developer shall ensure that any landscape contractor employed by the developer shall carry out the periodic maintenance of all planted areas, other than any areas for which the appointed Management Company becomes responsible during the said Maintenance Period. Inspection checks shall be carried out at monthly intervals and the appropriate work carried out.

4.3. The Developer shall ensure that any landscape contractor employed by the developer shall carry out in all areas any shrub, tree, grass and other plants replacements that may be necessary until transfer of responsibility to the Management Company.

4.4. The Management shall be responsible for all periodic maintenance and replacement thereafter for all planted areas to which its management agreement relates, and shall ensure that any landscape contractor employed by it carries out periodic maintenance of all such areas in accordance with the general horticultural schedules below. Either inspection checks shall be carried out by a competent person, a member of British Association of Landscape Industries (BALI) or the Landscape Institute (LI), acting for the Management Company, at minimum monthly intervals and the appropriate work carried out.

- 4.5. No existing trees, shrubs or grass shall be removed or cut without specific instructions from the Contract Administrator and written agreement of the Local Planning Authority Tree Officer. Existing trees are to be retained, protected and undisturbed throughout the contract.

5.0 Existing Trees and Vegetation

- 5.1. All works should be undertaken in accordance with the British Standard BS3998:2010 Tree Work Recommendations, by recognised tree contracting companies from the Arboricultural Association's list of registered contractors. Proof of experience and insurance provision will be required. All work shall be undertaken at the appropriate time and with the consent of the Management Company and Local Planning Authority if necessary.
- 5.2. All operations should be carried out in a sensitive manner, taking care not to unnecessarily damage the trees that are being worked on, or any other neighbouring vegetation. The practice of natural target pruning should be used to ensure that branches are not cut “flush” with the stem, and conversely, a “stub” is not left proud, as in both scenarios it is not possible for the tree to adequately react to the wounding and may lead to an area of decay developing.
- 5.3. All trees on site should be visually checked annually. These checks should be staggered so that the trees are inspected at different times in the year. If any tree displays signs of decline, distress or damage then a competent person should be instructed to carry out a tree inspection where necessary. A comprehensive inspection of all the trees on site should be carried out by a competent person at a maximum interval of every three years.
- 5.4. Where there is a need for surface treatment refer to ACD Landscape Proposal Plan for details.
- 5.5. All arisings from any work carried out, including leaf material, branches, wood chip and timber should be removed from site, unless otherwise specified. The work site should be left clean and tidy as instructed.
- 5.6. If large branches or entire trees need to be dismantled it is recommended that a rigging system be used where possible in order to reduce the risk of damage to surrounding structures and also to reduce ground compaction and deterioration during works. It is preferable if contractors are certificated with NPTC Unit CS41 Dismantling and Rigging.

- 5.7. Heavy Ivy infestation is not recommended in development situations, where wind risk may be a concern. The form of the tree can also be affected and it is therefore proposed to remove any dense infestation of Ivy if evident or to simply sever any ivy stems at the base of the tree during the maintenance period.

6.0 Amenity Grass (Turf)

- 6.1. Grass shall be cut during the growing season (generally April-October) using a sharp cutter to leave about 30-35mm of growth and remove arisings from site.
- 6.2. Grass will be cut at intervals of not more than 10-14 days depending on growing conditions. Arisings shall be collected and removed from site. A dressing of prepared fine fishmeal shall be applied at the rate of 60gms/m squared after the second mowing and the arisings of the cut following are to be allowed to fly.
- 6.3. The sward shall be maintained weed free by an annual application of a selective weed-killer or other equal and approved as necessary. This is to be used by an appropriately trained and qualified individual.
- 6.4. Grasses edges to planted areas to be trimmed to maintain a clear smooth edge to planted beds; trim edges elsewhere but not against trees; spike annually in October.
- 6.5. Should bare patches of grass develop, area is to be cultivated to 150mm and then seeded with amenity grass seed. To be cross-sown in two directions at right angles to each other, (half the seed being used in each direction) at the rate of 35 gm per square meter and the ground lightly raked over on a still dry day when the top 25mm of soil is dry. Use 'A22 Low maintenance' mix as supplied by Germinal Seeds Ltd, or similar and approved by Local Planning Authority. Germinal Seeds Ltd tel: 01522 868714.

7.0 Wildflower Grassland

- 7.1. Following the autumn sowing, the wildflower grassland is to be cut in March to 4-7cm if there is sufficient material. It is then to be cut to 4-7cm in early May and to 4cm in September (following flowering).
- 7.2. During the following years, the wildflower grassland is to be cut to 4-7cm in March/April (to remove excess grass) and to 4cm in September/October (following flowering).
- 7.3. All arisings are to be removed from site.
- 7.4. Any hollows which appear shall be filled in with topsoil and allowed to re-seed naturally.

8.0 Shrub and Tree Planting

- 8.1. Formative tree pruning is to be undertaken until a permanent structurally sound scaffold system of branches typical of the species and appropriate to the site circumstances is produced.
- 8.2. Post-planting management and maintenance of trees shall be in accordance with BS8545:2014 section 11 Trees: from nursery to independence in the landscape-recommendations.
- 8.3. A formal assessment of young tree health and development shall be undertaken annually. This assessment shall include foliar appearance, leaf size and leaf canopy density, extension growth and incremental girth development. Trees shall also be assessed continually throughout the year on an ad hoc basis. Wherever practicable the performance of young trees shall be assessed by testing leaf fluorescence and leaf chlorophyll content.
- 8.4. The density of planting will require that all weeding is carried out by hand, using the appropriate tools. All resultant material should be removed from site.
- 8.5. The Management Company is responsible for litter picking in those areas that it manages.
- 8.6. All plants shall be inspected monthly for wind firmness and firmed as necessary at the same time. Stakes shall likewise be checked for firmness and all tree and plant ties inspected and made good if required.
- 8.7. All stakes and ties shall be removed as soon as the developing root system is strong enough to support the tree, this is usually after two full growing seasons.
- 8.8. All grilles, grids, guards and other protective furniture shall be inspected annually and removed as soon as it is no longer needed to protect the tree or where it is causing damage to the tree.
- 8.9. The soil around newly planted trees shall be regularly inspected for soil capping or compaction and remedial action taken if needed.

- 8.10. All trees shall be checked regularly for mammal, human or other external damage and remedial action taken where necessary.
- 8.11. Minor pruning of dead or damaged wood shall be carried out annually. All wounds must not be treated with a sealant as per BS3998:2010 Tree Works Recommendations. On substantial trees, the Local Planning Authorities Tree Officer must be consulted for any necessary approvals.

Watering: All plants are to be well watered immediately after planting operations. To be wet to full depth of topsoil or wet to field capacity using either potable mains water, recycled or treated grey water. If there is any surface compaction the soil is to be loosened to direct water to the rootzone, taking care not to damage or loosen plants. Watering operations are to be undertaken as many time as necessary in order to ensure the continued thriving of all planting materials. Any failures due to drought shall be replaced by the Management Company/ies at their own cost.

- 8.12. Water restrictions: If water supply is, or is likely to be, restricted by emergency legislation, submit proposals for an alternative suitable source of water. Obtain instructions before proceeding.
- 8.13. All planted areas shall be given an application of an approved top dressing at the rate of 40g/m² in May. This should be in slow release form e.g. Enmag or similar. This should be worked lightly into the soil, without disturbing the roots, before the bark mulch is re-spread. Unless specific nutritional deficiencies are identified, no fertiliser shall be applied to newly planted trees in the first season. If visual inspection points to nutrient deficiency further investigation of causes will be necessary. Remedial action may include addition fertiliser application, pH testing, assessment of organic content and levels of compaction.
- 8.14. Shrubs shall be maintained in a balanced shape and shall be annually pruned to allow for this. Any growth which will obscure windows, signs or sight-lines shall be removed. Once established, any support canes shall be removed from the shrubs. Trailing and climbing material shall be assisted in its growth by securing growing leaders where necessary.

- 8.15. Groundcover planting species have been specified so as not to exceed 600mm in height. However, should planting exceed expectations, this should be carefully cut down to below 600mm in height to avoid interference with visibility.
- 8.16. The bark mulch should be maintained at an even spread, 75mm deep, of consistent thickness, to ensure that it is effective as a weed suppressant and moisture conserver. Following any maintenance operations and on a bi-annual basis, the mulch shall be supplemented to allow for any material which may have been lost.
- 8.17. No plant substitutions to be made without the prior written agreement of the Local Authority Landscape Section.

9.0 Hedgerows

- 9.1. Hedge maintenance operations are to be carried out in line with general principles as outlined in the previous section, including clauses detailing litter removal, weeding, trimming, removal of dead plants and reinstatement of plant materials.
- 9.2. Around free standing hedges a 3 strand galvanised wire and tanalised softwood timber post fence, to BS1722 Part 3:1986 Fences, specification for strained wire fences, is to be erected to run through the centre of the proposed hedgerow. This is to prevent access through the site by pedestrians until the hedges are fully established. After five years, the hedges have fully established. The temporary fences are to be removed from site.
- 9.3. Trimming of rapidly/ ready established hedges: Hedges are to have lateral branches moderately trimmed with the hedge allowed to reach planned height as rapidly as possible. Once at the desired height then the tops of the hedge can be trimmed as necessary to maintain a dense formal hedge.
- 9.4. Trimming of slowly establishing hedges: Hedges are to be trimmed to a minimum until the hedge is close to the desired height. This is to enable the plants to put on as much growth as possible. The hedgerow will then 'fill out' naturally. Pruning operations are to be undertaken in August or September.
- 9.5. Hedge Heights: Hedges to be maintained in a neat clipped form to a maximum height of 1m/0.4m as shown on original landscape proposals.

10.0 Play Equipment

- 10.1. Routine visual inspections are to be undertaken weekly, by a competent person. Inspections are to be recorded which includes details of any vandalism, use of facility and weather conditions.
- 10.2. Any litter that is present during the routine visual inspections, this is to be removed from the facility immediately. Any vandalism is to be reported to the local planning authority and if any equipment is deemed unsafe due to an incident of vandalism this is to be rectified immediately or the facility closed until the equipment can be made good. During the routine visual inspections the following operations are also to be undertaken:
- Remove any objects which do not belong in the playground. This is to include cleaning of the surface and litter.
 - Inspect for missing or broken parts and if necessary, lubricate or replace components.
 - Inspect frames, structures and joints and retighten as necessary.
 - Inspect moving or wearing parts, nets and ropes and repair and replace as necessary.
- 10.3. Operational inspections for the operation, stability and wear of equipment and surface is to be conducted every three months. Any repair is to be reported to the Appointed Management Company. Any repair works are to be undertaken as a matter of urgency in order to maintain the safe, functionality of the play facility.

10.4. An annual inspection is to be undertaken which consists of a technical check of equipment or features for long-term wear. This could be undertaken by an independent specialist or qualified engineer. Any equipment which is deemed unsafe due to long term wear is to be replaced or made good as a matter of urgency in order to maintain the safe, functionality of the play facility. During the annual inspection the following operations are also to be undertaken:

- Inspection of the support structures and foundations for rust or rot, take appropriate action when necessary.
- Inspect painted wood components, plywood and metal parts and apply a new finish in line with manufacturer's recommendations and with BS EN1176 Playground Equipment and Surfacing, where necessary.

12.0 Roof Landscapes

- 12.1. Routine visual inspections of the roof landscape are to be undertaken monthly that note the following:
- Wildflower establishment,
 - Diversity of new species present,
 - Weed spectrum and control requirements (if any),
 - Drainage of roof and function of drainage outlets,
 - Performance of roof and retention systems (if present),
 - Water and irrigation requirements of roof,
 - Feeding requirements,
 - Remedial requirements,
 - Physical damage caused by weather or transit.
- 12.2. Localised spot weeding of invasive or damaging weeds to be undertaken by hand and removed from site.
- 12.3. Re-seeding and remedial patching of roof areas caused by poor establishment, (not adverse weather effects or insufficient irrigation.)
- 12.4. Inspection and assessment of irrigation systems (if present) with irrigation and watering operations adjusted to suit weather conditions to ensure continual growth of sward.
- 12.5. Visual inspection of drainage channels and clearing of exposed outlets if any debris, litter or silt has accumulated. This is to be removed from site.
- 12.6. Spent flower, seed heads, perennial weeds and grasses are removal annually from wildflower roofs.
- 12.7. Application of herbicides are weed species specific, low impact and used only as a last resort to tackle invasive or widespread weed problems.

12.8. To ensure that the diversity of the roof high, wildflower roofs should be mown to control the species that populate the roof. The amount and timing of mowing will vary throughout the establishment of wildflower systems, in line with the following:

- For new wildflower roofs, mowing is to be undertaken in the first year after establishment and should be mown to a height of 50- 80mm four times a year. Once mowing operations have been undertaken the arisings are to be left for a few days to allow seeds to drop, ready for the next year. After this, however, the arisings should be removed in order to keep the nutrient levels in the soil down and stop the wildflower roof from becoming monoculture.
- For established wildflower roofs, mowing operations should be undertaken in late summer in pituitary. This is to help the wildflower roof to maintain their place in the meadow and to avoid the roof becoming dominated by grass species. For wildflower roofs which are designed to attract bees and butterflies then the mowing operations should be undertaken in September. Once mowing operations have been undertaken the arisings are to be left for a few days to allow seeds to drop, ready for the next year. After this, however, the arisings should be removed in order to keep the nutrient levels in the soil down and stop the wildflower roof from becoming monoculture.

12.9. A strimmer may be substituted if a mower cannot be utilised on the roof landscape.

13.0 Hard Landscaping

13.1. Management objectives will seek to:

- Ensure regular safety checks and maintenance of street furniture including boundary treatments, lighting, fences and gates so that they remain in a safe and usable condition, fit for purpose.
- To achieve a clean, tidy condition and appearance of all external areas.

13.2. Inspection and removal of any objects which do not belong in or on the hard surfacing or street furniture is to be undertaken. This is to include cleaning of the surface and removal of objects and weeds, and is to be carried out weekly.

13.3. Inspect for missing, broken parts, joints and wearing parts and if necessary, lubricate, replace components, retighten etc as necessary to gates and lighting. Inspections are to be carried out fortnightly.

13.4. Inspection of the support structures and foundations for rust or rot, take appropriate action when necessary annually.

13.5. Inspect painted wood components, plywood and metal parts and apply a new finish in line with manufacturers recommendations where necessary annually.

13.6. Stain removal to hard surface is to be in accordance with BS7370-2.

13.7. Enclosures are to be maintained and inspected monthly and appropriate repairs undertaken as necessary.

13.8. Inspection for any uplifted pavements or cracks to be undertaken and appropriate action taken as necessary.

13.9. Any vandalism (including graffiti) which occurs is to be reported to the Local Planning Authority and remedied or replaced as appropriate by the appointed contractor as soon as possible.

14.0 Maintenance Schedules

Every week

- All plants shall be watered following 10 days without rain. Then weekly until natural rainfall during June – August.
- Routine visual inspection of play equipment, with operations conducted to ensure that safe use of facility if maintained.

Every two weeks

- Amenity Grass to be cut every 10-14 days
- There should be a minimum fortnightly litter pick over the entire site within areas covered by the Management Company/ies.

Every month

- Weed control shall be allowed for at monthly intervals. All areas to be weeded by hand.
- All plants shall be inspected monthly for wind firmness and firmed as necessary at the same time. Stakes shall likewise be checked for firmness and tree ties checked.
- Inspections of roof landscape and operations as outlined in section 12.0

Every three months

- Operational inspection of play equipment, with operations conducted to ensure that safe use of facility if maintained.

Every six months

- The bark mulch should be topped up bi-annually
- Grass cutting to Wildflower areas – cut in line with guidance given in section 7.0
- Hedges to be managed – cut in line with guidance given in section 9.0
- After two years tree stakes and ties are usually ready to be removed.

Annual

- Replacement of any failed trees or shrubs will be allowed for annually to ensure that the planting areas are fully stocked at all times.
- Any hollows which appear due to settlement shall be top dressed annually, early in the growing season.
- Minor pruning of dead or damaged wood shall be allowed for annually.
- All planted areas and trees shall be given an application of an approved top dressing in May. Not in Wildflower areas.
- Shrubs shall be maintained in a balanced shape and prevented from obscuring signs, windows and encroaching on paths.
- Check for invasive species as mentioned earlier and remove from site.
- Undertake a formal assessment of young tree health and development.
- Tree grilles, grids and guards shall be inspected and if necessary removed.
- Annual inspection of play equipment with operations conducted to ensure that safe use of facility if maintained.

Every 5 Years

- A suitably qualified person employed by the Management Company to undertake a review of the condition, success and long-term maintenance of the planting.

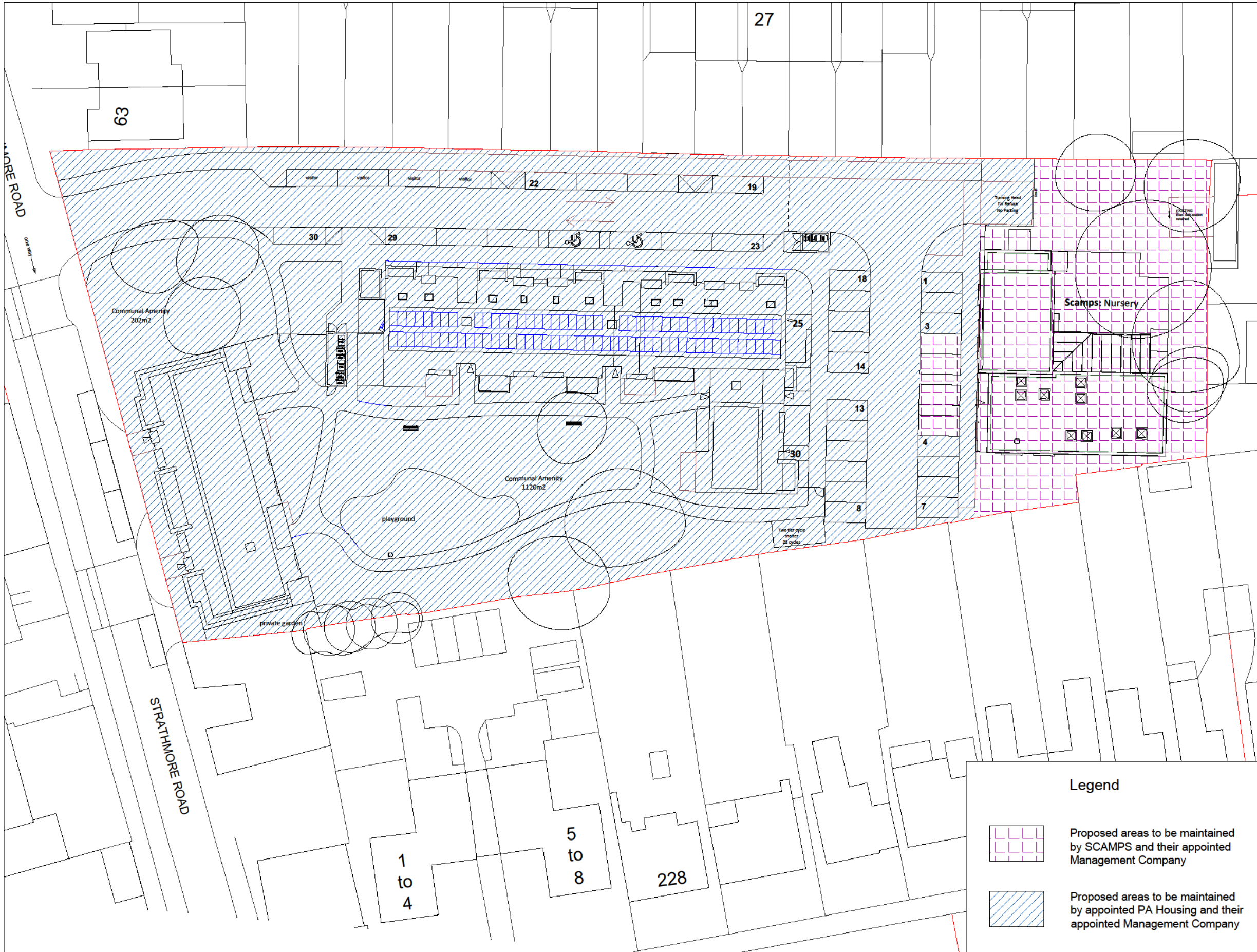
Any amendments to the landscape management plan required to ensure a good planting scheme should be submitted to the LPA for approval. The LPA may draw the managing company's attention to defects in the maintenance or failure to comply with the landscape management plan and require that the Management Company rectify these defects or apply for a variation to the landscape management plan.

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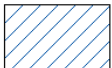
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PA Housing
 scheme: Strathmore Centre
 Teddington
 client: PA Housing
 drawing: Landscape Management
 and Maintenance Plan
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Legend

-  Proposed areas to be maintained by SCAMPS and their appointed Management Company
-  Proposed areas to be maintained by appointed PA Housing and their appointed Management Company



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