



LANDSCAPE
ARCHITECTURE

Chartered Landscape Architects

LANDSCAPE AND WOODLAND MANAGEMENT REPORT

Client: Stonebond Properties & Great Places Housing Association

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1. Introduction

1.1 General

DAC Landscape Architecture Ltd have been appointed by Stonebond Properties and Great Places Housing Association to produce a Landscape and Woodland Management Plan to support the planning application for the scheme at Norden in Rochdale. The document contains details of the maintenance and management of all public soft landscape elements and once approved will set out the guidelines for future management.

1.2 Aims

The aim of the report is to establish a coherent, holistic and integrated approach to the management of the landscape elements associated with the development.

The purpose of the document is to provide a structured maintenance and management plan for a five-year period post installation along with key long term objectives. It is expected that this document will form the basis of future management operations beyond the five-year period.

This document should be read in line with the approved landscape drawings, schedules and specifications.

Supporting drawings:

N002-LA-PL-00-001 Planting Plan (1 of 4)

N002-LA-PL-00-002 Planting Plan (2 of 4)

N002-LA-PL-00-003 Planting Plan (3 of 4)

N002-LA-PL-00-004 Planting Plan (4 of 4)

This document sets out clear objectives, sets the parameters for inspections and maintenance operations to ensure the landscape is given the best opportunity to reach maturity and as it was designed.

1.3 Maintenance and Management Responsibility

A landscape management company will be appointed to carry out the regular maintenance of landscape elements including the streetscape (verges and tree planting), public open space and the existing woodland. The management company will be responsible for the site inspections and keeping a logged record of inspections, faults and rectified works.

A landscape contractor is to be appointed by the client/ developer. The contractor can either be the original installation contractor or a separate, competent and appropriately certified party. It is recommended that the landscape contractor is BALI registered.

1.4 Key Objectives

The key objectives for the maintenance and management of landscape areas include:

- Establishing and maintaining all grassed areas, promoting healthy growth and to have a neat and consistent appearance;
- Enabling shrub and herbaceous planting to reach their species potential in terms of form, shape and flower;
- Support the healthy growth and establishment of the proposed trees and provide them with the best environment to reach their potential form, shape and character;
- Establish species rich grassland allowing for a diverse mix of flowers and grasses to thrive;
- Ensure the presentation of the site is consistent and has a well maintained appearance.

2 Site Description and Context

2.1 Existing Context

The development site is located on a parcel of land to the north of Edenfield Road within Norden, a village located in the Metropolitan Borough of Rochdale. The site is bordered by existing settlement to the north east, a small scale industrial site to the west and further residential areas to the south of Edenfield Road.

The site is contained by existing woodland that creates a well wooded appearance to the site. Naden Brook watercourse snakes along the south western boundary of the site.

The site sits within a valley on two separate plateau areas. The adjoining landscape rises towards the surrounding residential areas.

2.2 Site Proposals

The proposal is for a residential development comprising 49 units with a range of 2, 3 and 4 bedroom properties. The development has one vehicle access point off Edenfield Road to the south east.

Each property is provided with their own car parking spaces and rear garden spaces. The arrangement of the housing is linear in form and faces onto the single access road that circulates the development.

The existing woodland that characterises the development site will largely remain, with localised tree removal necessary to facilitate the development.

The landscape design responds to the site layout design by incorporating street trees to line the new access road, accompanied by trees and hedgerows to create formality to the street scene. Additional areas of shrub planting are proposed to add seasonal interest and define character areas. Where possible, larger native trees and shrub planting are proposed to integrate the open green space with the wider setting.

3 Health and Safety

3.1 Overview

Health and Safety methods must be followed to ensure safe work practices are applied as part of the ongoing maintenance and management operations. The following possible hazards have been identified that may have implications on the maintenance operations:

- Ensure the contractors are aware of any below ground services and their location prior to carrying out any works;
- Ensure appropriate safety measures are used when working at elevated positions. This includes using suitable safety harnesses or similar when working at height and being aware of the impact of maintenance operations on others;
- Being respectful and aware when working in close proximity to the public (on foot, bikes, wheelchairs, vehicles etc). Potentially dangerous tools and/or machinery should not be left unattended;
- Prohibit the use of chemicals that are known to be hazardous to humans and animals;
- Carrying out operations in close proximity to highways;
- Ensure suitable equipment is used for lifting heavy objects and working with heavy machinery;
- Use appropriate safety mechanisms when using potentially dangerous equipment such as chainsaws or similar. Secure off areas at the base of trees if carrying out tree works;

It is expected that competent contractors will provide their own risk assessment prior to carrying out the maintenance operations. The risk assessment should identify the hazards associated with any maintenance operations along with methods for reducing the risks. The risk assessment should be recorded and retained for reference in the future if necessary.

3.2 Site Operations

All maintenance operations are to be carried out by experienced or suitably qualified operatives with appropriate safety clothing and equipment.

The maintenance contractor must comply with latest guidance on safe working practices and carry out all operations with regards to the safety and welfare of the public, environment and below ground services.

It is important the contractors make themselves aware of relevant health and safety guidance from the recognised industry body, the local authority and Health and Safety Executive.

3.3 Material Disposal

All, rubbish, leaves, grass and general arisings removed from the site are to be deposited at a licensed tip and recycling facility in the appropriate section.

4 Soft Elements

This report has been produced on the basis that all external landscape elements have been installed in line with the approved drawings. Any defective stock, whether that be failing plants, plants in poor health or dead stock should be replaced by the original landscape contractor at the end of the Rectification Period.

4.1 Existing Individual Trees

4.1.1 Objectives

Existing individual trees should be maintained to ensure they are kept in good health, are structurally sound and can be retained in the long term as part of the development proposals. The existing trees play an important part of preserving the existing character whilst supporting wildlife habitats. They are considered to be a valuable asset to the site and contribute to the amenity value.

4.1.2 Inspections

A formal visual inspection is to be carried out on an annual basis by a qualified Arboriculturalist or competent and experienced tree surgeons to ensure the existing trees are healthy and do not pose any potential risk to the site users. It is recommended further inspections are carried out following extreme weather conditions.

A report of the inspections and any defects requiring remedial work should always be logged.

4.1.3 Operations

All tree works should be carried out by an experienced Arborist/ Tree Surgeon in line with BS3998:2010 and Section 8.8.3 of BS5837 Post Development Management of Existing Trees.

Any trees works should be carried out to support the long term health of the tree and to eliminate any potential risk to the public.

All tree works are to be undertaken outside of the bird nesting period (March to August inclusive).

The retention of all trees on the approved planning drawings is paramount. If there is any reason that further felling is required due to health and safety risks, then the relevant authorities should be notified.

All trees that are located within falling distance of pavements, highways and dwellings are to be maintained in a safe condition. If there are any signs of significant decay on the trunk, they should be managed, treated and monitored regularly.

Works should not be undertaken on trees that do not fall within the site boundary (apart from overhanging branches). Should a tree be dead, dying or pose a potential risk to the public, the land owner must be notified and actioned accordingly.

The contractor should check if trees are covered by Tree Preservation Orders ahead of carrying out any remedial work, and if so to gain the appropriate consent from the local authority.

These works are the responsibility of the contractor with input required from a qualified Arboriculturalist/ Arborist.

4.1.4 Existing Trees: Maintenance Regime Table

Operation	Months												Notes
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Visual inspection									1				Annual check to review condition of existing individual trees. Check for signs of disease or decay.
Removal of trees (if in poor condition, dead or pose a health and safety risk)									1				Removals to take place outside of the bird nesting period.
Pruning works									1				Pruning to take place outside of the bird nesting period. Retain natural shape and form of the trees.

Number of operations:

- 1 1 operation per month
- 2 2 operations per month
- 4 4 operations per month
- a/r As required

4.2 Existing Woodland

This section should be read in line with the arboricultural report which details the species and categorisation of the trees contained within the existing woodland. The report presumes that any initial remediation works noted within the survey on retained trees will be carried out in line with the following text.

The existing woodland comprises a mixed broadleaved woodland primarily containing Sycamore, Oak, Goat Willow and Ash.

4.2.1 Objectives

The woodland is a key character of the site and the retention is integral to maintaining the well wooded appearance.

The existing woodland trees must be maintained in a safe condition and ensure the trees do not cause any obstructions on site or pose any health and safety risk to the site users.

4.2.2 Inspections

The retained woodland trees should be monitored by a qualified Arboriculturalist or competent and experienced tree surgeons and managed in accordance with Section 8.8.3 of BS5837 Post Development Management of Existing Trees, in order to protect the public and as part of the landowner's duty of care.

Further annual inspections should be carried out and following any major storms/ extreme weather conditions. These checks should be carried out by an experienced Arborist/ Tree Surgeon with any potential risks to the public identified along with a strategy on any remedial works.

Inspections and any remedial works should be kept in a logged record.

Any trees that are located in close proximity to pavements, highways and dwellings should be inspected on an annual basis to review and eliminate any potential risks to the public, residents or vehicles.

4.2.3 Operations

Maintenance operations on the existing trees should primarily be focussed on ensuring the health and safety of the public and support the longevity of the woodland.

Remedial works should be carried out by an experienced Arborist/ Tree Surgeon. All works should be carried out by using the appropriate safety equipment and clothing, and to perform the operations in line with BS3998:2010 Tree Work - Recommendations.

It is noted within the arboricultural report there is the presence of Ash species. This species is subject to Ash die back and should be inspected to see if there is evidence of the disease in the existing trees. If there is evidence of Ash die back, infected branches should be pruned or removed to prevent the spread of the disease. Ensure the equipment used to prune/ remove the infected branches is cleaned and disinfected to avoid further contamination.

All tree works should be undertaken outside of the bird nesting season (1st March to 31st August inclusive).

Prior to undertaking any major tree works, a qualified Arboriculturalist must be consulted to identify what works are to be carried out. Consult an ecologist if any works are required to trees that have bat roosting potential. This must be done ahead of works commencing.

All trees that are located within falling distance of pavements, highways and dwellings are to be maintained in a safe condition. If there is any sign of significant decay on the trunk, they should be managed, treated and monitored regularly.

Retain fallen deadwood where possible and practical, to maintain habitat diversity within the woodland.

Routine tree pruning operations:

- Removal of dead, diseased, damaged or dying branches where they pose a health and safety risk;
- Removal of vegetation where it is restricting access or light levels to adjacent properties;

- Inspect and report any incidence of pests and diseases which could cause trees or limbs to fail;
- Maintain the natural shape and form of the tree following any surgery works.
- Felling of trees should be carried out safely and in line with BS3998:2010.
- Replacement planting should be agreed with the local authority should large areas of trees or individual large specimens need to be felled

These works will be the sole responsibility of the maintenance contractor and should consult a qualified Arboriculturalist/ Arborist if necessary.

4.2.4 Thinning and Cutting

Any trees that require thinning should be cut down to a level stump height of circa 150mm above ground and treated with a stump killer. Approximately 50% of the stump surface should be treated to prevent re-growth.

Thinning and cutting works to understorey vegetation should be carried out on an annual cyclical programme (5 - 10 year cycle). Works to be undertaken outside of the bird nesting season (March to August inclusive). Works to vegetation that may impact on bat roosting will require specialist advice from an ecologist ahead of carrying out the work.

4.2.5 Conserving Deadwood

Following thinning, pruning or clearance works, any deadwood identified under 250mm in diameter should be collected, chipped and re-used sustainably on site for mulching.

Deadwood piles should be created using any excess wood (fallen, thinned and pruned) that is greater than 250mm in diameter and be positioned appropriately in the woodland. If deadwood is found on site and does not pose a health and safety risk, then it can remain insitu.

Bat roosting may have occurred in dead trees. Do not remove the tree and instead reduce in size so standing deadwood remains.

4.2.6 Existing Woodland: Maintenance Regime Table

Operation	Months												Notes
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Visual inspection of existing trees close to public areas or where branches overhang into the site.									1				Carry out on an annual basis. Remedial works to be carried out immediately. Inspected by a qualified Arboriculturalist.
Inspect following extreme weather conditions i.e. storm													As necessary Inspected by a qualified Arboriculturalist.
Removal of dead, diseased or damaged branches		1							1				To be carried outside of the bird nesting season or immediately if branches are an immediate risk to the public.
Pruning of trees - if causing any obstructions									1				To be carried outside of the bird nesting season
Removal of diseased trees and/ or treatment of any diseases													To be carried outside of the bird nesting season. Check for bat roosting (advised by ecologist) Felling to be in accordance with BS3998:2010 Treatment to be advised by a qualified Arboriculturalist/ Arborist
Create deadwood piles with excess woody material found on site.	1												As available on site. If deadwood is found in locations that do not cause obstruction to public areas/ maintenance then it should be left insitu.

Number of operations:

- 1 1 operation per month
- 2 2 operations per month
- 4 4 operations per month
- a/r As required

4.3 Proposed Individual Trees

4.3.1 Objectives

Trees are proposed within verges, public open space and to the front of properties. The trees play an important role in creating structure within the development, provide seasonal interest, add to the visual amenity and soften the built form.

Future trees works must be undertaken by a skilled and experienced Arborist and in accordance with BS3998: 2010 'Tree Work - Recommendations'.

4.3.2 Inspections

A formal visual inspection is to be carried out on an annual basis when the trees are in leaf. This is important to ensure the trees are healthy and thriving.

A report of the inspections and any defects requiring remedial work should always be logged.

4.3.3 Operations

It is imperative that the new trees are given the best possible chance of establishing. During the first few years, the trees will be subject to weed growth at the base. These should be removed by hand and bark mulch reinstated to a consistent depth of 75mm. Mulching layers should be inspected several times a year during the growing season and be topped up as necessary.

Any fallen leaves should be raked, collected and removed from site.

Apply an appropriate fertiliser to the new trees if they are showing signs of poor growth. Review over the coming months to check if the trees are responding to the fertiliser and investigate ground conditions if continuing poor growth is evident.

If any trees continue to show signs of poor growth, fail or die, they should be replaced to the original specification in terms of species and size.

New trees will require regular watering, particularly during the first few years following installation. This is also the case through prolonged dry periods (summer months).

The trees should be watered during dry periods (May to September), through the first full growing season and as determined by the maintenance contractor following the regular inspections. Ensure the soil is fully saturated.

Ensure irrigation ring caps are visible, free from debris and not submerged by the surrounding soft landscape/ mulching layers.

Use alternative methods of watering, should water restrictions apply.

Inspect tree ties and stakes twice per year as part of the maintenance visits. Adjust ties and stakes as required to accommodate growth and prevent rubbing on the stem. Any damaged or loose stakes should be reinstated as appropriate.

Evidence of damage to the tree bark should be cut back with a sharp knife.

Tree ties should be removed and stakes cut down to the ground when the trees can support themselves (usually after a 3 to 5 year period depending on growing conditions).

Pruning works on young trees are not usually required except where there is evidence of dead or diseased branches. Any pruning works should be carried out using a sharp knife and ensure the natural shape and form of the tree is promoted.

These maintenance works will be the sole responsibility of the maintenance contractor.

4.3.4 Proposed Individual Trees: Maintenance Regime Table

Operation	Months												Notes
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Visual inspection - general					1								Inspect on an annual basis for signs of poor growth, failure or disease.
Visual inspection - trees located in prominent locations i.e. street trees, adjacent to highways and public areas.			1		1				1				Ensure trees are healthy and do not pose a health and safety risk.
Apply a slow release fertiliser													Only apply to trees if they are showing signs of poor growth.
Review bark mulch layers/ presence of weeds				1	1	1	1	1	1				Maintain 75mm bark mulch layers - top up once per year Remove weed growth from the base of trees.
Check tree stakes and ties				1					1				Review tree stakes and ties. Ensure stakes are securely in position, upright as designed. Adjust the tree ties as necessary to support growth. Remove tree ties once the trees can support themselves.
Watering					a/r	a/r	a/r	a/r	a/r				Water as determined by the management company following the regular inspections. Watering should be increased during the summer periods/ periods of drought.
Pruning		1							1				Remove dead, damaged or diseased branches. Remove lower stem growth using a sharp knife/ secateurs where necessary to promote natural shape and form of the tree.
Removal of fallen leaves											1	1	Rake and remove fallen leaves to maintain neat appearance of the site and prevent potential hazard.
Tree replacements	a/r	a/r									a/r	a/r	Replace any failed trees to the original specification within the next available planting season.

Number of operations:

1 1 operation per month

4 4 operations per month

2 2 operations per month

a/r As required

4.4 Proposed Riparian Mix

4.4.1 Objectives

The Riparian planting is proposed alongside Naden Brook that runs along the south western/western boundary. The planting mix aims to create a habitat that supports wildlife adjacent to the brook and complements species that are present on site. The species selected are suitable for being planted adjacent to a watercourse.

4.4.2 Inspections

The riparian planting requires minimal maintenance, however, the area should still be inspected as part of the maintenance inspections during the winter months and outside of the bird nesting period to minimise wildlife disturbance.

A report of the inspections and any defects requiring remedial work should always be logged.

4.4.3 Operations

It will take time for the newly planted trees to establish and it is expected there will be weed growth. Remove weed growth by hand and any other build up of litter, and dispose of accordingly.

Check tree spiral guards as part of the annual inspection and adjust if necessary.

Any damaged guards should be replaced and guards should be removed once the planting mix has established (usually in a 3 to 5 year period).

It is recommended to avoid the use of herbicides due to the proximity to Naden Brook. Herbicides are potentially harmful to wildlife and can impact of the water quality. Use an environmentally friendly based product to remove weed growth if necessary.

As the whips establish, apply the maintenance principles set out in the 'Proposed Individual Trees' section for ongoing long-term maintenance.

These works will be the sole responsibility of the maintenance contractor.

4.4.4 Proposed Riparian Mix: Maintenance Regime Table

Operation	Months												Notes
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Visual inspection											1		Inspect the riparian mix on an annual basis during the winter months to avoid disturbance to wildlife.
Remove fallen leaves, weeds, debris, litter	1	1									1	1	Dispose leaves and weeds in an appropriate licensed green waste bin and remove litter from site.
Tree replacements	a/r	a/r									a/r	a/r	Replace any failed trees to the original specification within the next available planting season.

Number of operations:

- 1 1 operation per month
- 2 2 operations per month
- 4 4 operations per month
- a/r As required

4.5 Proposed Native Shrub Mix

4.5.1 Objectives

Native shrub planting provides an invaluable habitat that supports a range of wildlife. These areas require low intervention maintenance, however, the nature of the species need to be controlled to prevent the shrubs dominating surrounding areas, including ornamental planting and encroachment over roads and pavements. The native planting in the long term will also provide a strong landscape buffer that aids with screening as well as creating a naturalistic character.

4.5.2 Inspections

A formal visual inspection is to be carried out at 6 month intervals, once at the start and once at the end of the growing season (April and September). This is important to ensure the shrub mix is healthy and establishing as intended.

A report of the inspections and any defects requiring remedial work should always be logged.

4.5.3 Operations

It will take some time for the bareroot stock to establish and it is expected there will be weed growth. Ensure there is a consistent layer of bark mulch to the base of the planted area to suppress weed growth.

A herbicide treatment should be avoided if possible, however, it may be necessary if weed growth is prevalent and is restricting establishment.

Should there be failures to any shrubs, they should be replaced to match the original specification and done so in the next available planting season.

During the first 2-3 years, the shrub areas will require regular watering. This is particularly the case during the summer months where extended dry periods are experienced. Watering should be carried out during the months of May to September.

As part of the regular maintenance checks, spiral guards should be inspected to ensure they are not restricting plant growth. Any damaged guards should be replaced and removed once the plants can support themselves.

These works will be the sole responsibility of the maintenance contractor.

4.5.4 Proposed Native Shrub Mix: Maintenance Regime Table

Operation	Months												Notes
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Visual inspection				1					1				Inspect the shrub mix on a 6 month basis. Report any defects.
Apply a slow release fertiliser													Only apply to shrubs if they are showing signs of poor growth.
Review bark mulch layers/ presence of weeds				1	1	1	1	1	1				Maintain 75mm bark mulch layers - top up once per year Remove weed growth from the base of shrubs.
Check spiral guards				1					1				Review spiral guards as part of inspections. Ensure guards are not restricting plant growth. Remove guards once the plants can support themselves Replace guards that are damaged during establishment.
Watering					a/r	a/r	a/r	a/r	a/r				Water as determined by the management company following the regular inspections. Watering should be increased during the summer periods/ periods of drought.
Pruning		1							1				Remove dead, damaged or diseased species. Prune back vegetation that is encroaching on public areas i.e. highways, pavements etc.
Plant replacements	a/r	a/r									a/r	a/r	Replace any failed shrubs to the original specification within the next available planting season.

Number of operations:

- 1 1 operation per month
- 2 2 operations per month
- 4 4 operations per month
- a/r As required

4.6 Proposed Ornamental Hedges

4.6.1 Objectives

The ornamental hedges provide structure to the landscape proposals, create separation between private and public areas, dress the street scene, create enclosure and are a directional tool within the development.

The aim is to promote healthy growth for the hedges, and give them the best opportunity to establish and reach their desired height.

4.6.2 Inspections

A formal visual inspection is to be carried out annually when the hedges are in full leaf to ensure they are thriving. Any gaps are to be identified and any failures are to be recorded in the inspection report. If significant failures have occurred, ground investigations may be required to determine the problem.

A report of the inspections and any defects requiring remedial work should always be logged.

4.6.3 Operations

The ornamental hedges should not be trimmed to the tops until they reach the desired height as detailed on the approved plans (1200mm max). The sides of the hedges are to be trimmed on an annual basis for the first four years during establishment to promote healthy and bushy growth.

Once the hedges have established, lightly trim to the tops to their desired height and the sides to create a neat appearance.

Maintain a 75mm depth of bark mulch to the base of the hedge to suppress weed growth.

Avoid the use of a fertiliser application unless absolutely necessary i.e. if there are areas of poor growth.

Watering should be carried out on a regular basis, particularly during prolonged dry periods. The hedges should be watered during May to September (during the first full growing season) as determined by the maintenance contractor following the regular inspections. Ensure the soil is fully saturated.

The hedges should not be allowed to exceed the height as specified above to ensure visibility and safety across the site is not compromised.

These maintenance works will be the sole responsibility of the maintenance contractor.

4.6.4 Proposed Ornamental Hedges: Maintenance Regime Table

Operation	Months												Notes
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Visual inspection				1					1				Inspect the hedges on a 6 month basis. Report any defects.
Apply a slow release fertiliser													Only apply to hedges if they are showing signs of poor growth.
Review bark mulch layers/ presence of weeds				1	1	1	1	1	1				Maintain 75mm bark mulch layers - top up once per year Remove weed growth from the base of hedges.
Watering					a/r	a/r	a/r	a/r	a/r				Water as determined by the management company following the regular inspections. Watering should be increased during the summer periods/ periods of drought.
Hedge trimming		1							1				Trim the sides of the hedge on an annual basis in the first couple of years to promote dense growth. Do not trim the tops of hedges until they reach their desired height (1200mm). Following establishment, lightly trim the hedges twice per year to maintain shape and form.
Remove fallen leaves, weeds, debris, litter	1	1									1	1	Dispose leaves and weeds in an appropriate licensed green waste bin and remove litter from site.
Hedge replacements	a/r	a/r									a/r	a/r	Replace any failed hedge species to the original specification within the next available planting season.

Number of operations:

- 1 1 operation per month
- 2 2 operations per month
- 4 4 operations per month
- a/r As required

4.7 Proposed Ornamental Shrub Planting

4.7.1 Objectives

The ornamental shrub beds add seasonal interest, foliage variation, colour, structure and define character areas within the development.

The long term aim for the shrub beds are to have total vegetation cover with canopies integrated and there to be no evident gaps. The maintenance operations should be carried out by a contractor experienced of working with plants and an understanding of how different species grow and establish. This is to ensure the shrubs and herbaceous plants are allowed to achieve their potential.

4.7.2 Inspections

A formal visual inspection is to be carried out annually when the shrub beds are in full leaf to ensure they are thriving. Any gaps are to be identified and any failures are to be recorded in the inspection report. If significant failures have occurred, ground investigations may be required to determine the problem.

A report of the inspections and any defects requiring remedial work should always be logged.

4.7.3 Operations

Planting beds will take time to establish over the first few years and will be subject to weed growth. Weed growth should be removed by hand and the bark mulch layer maintained at a consistent depth until the plant canopies meet. This is to suppress future weed growth and keep moisture in the soil.

Watering should be carried out on a regular basis, particularly during prolonged dry periods. The shrub beds should be watered during May to September (during the first full growing season) as determined by the maintenance contractor following the regular inspections, and to ensure the soil is fully saturated.

Watering should be carried out using a low pressure hose pipe and evenly distributed at a rate of 25 p/m². Do not water the plants during the intense periods of heat to avoid scorching.

Pruning works may be required to shrub species that encroach over footpaths, parking bays and roads. If this is the case, lightly prune back the plants whilst maintaining their natural shape and form.

It is not expected that routine annual pruning of shrubs will be required within the first few years.

There are some flowering shrubs and herbaceous species that will need to be maintained to promote new growth. Herbaceous plants typically are softer in character than shrubs and die back during the winter months. Dead stems and leaves are to be tidied up in spring following periods of frost, and dead vegetation cut with sharp secateurs or removed by hand.

It may be possible to split and replant the herbaceous plants depending on the species.

Lightly prune early blooming plants once they have flowered to encourage a second flowering in Autumn.

Within the planting beds, specimen plants are proposed as feature stock to give height and added interest to the beds.

These maintenance works will be the sole responsibility of the maintenance contractor.

4.7.4 Proposed Ornamental Shrubs: Maintenance Regime Table

Operation	Months												Notes
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Visual inspection				1					1				Inspect the shrubs on a 6 month basis. Report any defects.
Apply a slow release fertiliser - as required													Only apply to shrubs if they are showing signs of poor growth.
Review bark mulch layers/ presence of weeds				1	1	1	1	1	1				Maintain 75mm bark mulch layers - top up once per year Remove weed growth from the base of shrubs.
Watering					a/r	a/r	a/r	a/r	a/r				Water as determined by the management company following the regular inspections. Watering should be increased during the summer periods/ periods of drought.
Remove fallen leaves, weeds, debris, litter	1	1									1	1	Dispose leaves and weeds in an appropriate licensed green waste bin and remove litter from site.
Pruning		1							1				Remove dead, damaged or diseased species. Prune back vegetation that is encroaching on public areas i.e. highways, pavements etc.
Remove dead foliage - as required													Remove/ cut back dead foliage. Dispose of in a licensed green waste tip
Selective thinning		1											Once the plants have established, carry out selective thinning to prevent overcrowding.
Plant replacements	a/r	a/r									a/r	a/r	Replace any failed shrubs to the original specification within the next available planting season.

Number of operations:

- 1 1 operation per month
- 2 2 operations per month
- 4 4 operations per month
- a/r As required

4.8 Proposed Amenity Grass

4.8.1 Objectives

Amenity grass should be well maintained at all times and have a clear definition between surrounding planting areas and have a neat interface with hard landscape surfaces.

4.8.2 Inspections

A formal visual inspection is to be carried out as part of the regular maintenance regime. An annual review should take place to identify areas that need further attention i.e. topdressing, overseeding etc.

A report of the inspections and any defects requiring remedial work should always be logged.

4.8.3 Operations

Fallen leaves, debris and litter should be removed prior to any mowing, removed from site and disposed of appropriately.

The sward height should be maintained between 25 to 50mm. The grass should be cut a minimum of 12 times per year with the optimum time during the growing season.

Only use a fertiliser application if absolutely necessary if there are signs of poor growth. Monitor moss growth and treat accordingly. Fertiliser can either be applied in spring or autumn depending on the need.

Selective herbicide may be required to limit weed growth and to protect the overall appearance of the sward.

Watering should be carried out at a rate of 15 litres p/m² during periods of drought and should not be undertaken during intense heat periods in the day.

The annual check will identify any need for topdressing, overseeding, scarifying, spiking or similar.

These maintenance works will be the sole responsibility of the maintenance contractor.

4.8.4 Proposed Amenity Grass: Maintenance Regime Table

Operation	Months												Notes
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Visual inspection				1									Carry out an annual inspection of the grass to identify specific issues.
First year cut				1	2	2	2	2	2	1			Mow when the sward reaches 100mm high Cuttings to be removed after 48 days.
Cuts beyond the first year						1	1	2	2	1			Cut as required to a minimum of 50mm. Regularly mow during the growing season.
Remove fallen leaves, weeds, debris, litter	1	1	1	1	1	1	1	1	1	1	1	1	Dispose leaves and weeds in an appropriate licensed green waste bin and remove litter from site.
Trimming edges				1	2	2	2	2	2	1			Maintain neat edges at the interface with hard surfacing and shrubs.
Apply fertiliser during the first 2 years				1						1			Spring and summer
Other actions: topdressing, overseeding, scarifying etc - as required													To be determined during the annual check

Number of operations:

- 1 1 operation per month
- 2 2 operations per month
- 4 4 operations per month
- a/r As required

4.9 Proposed Species Rich Grassland

4.9.1 Objectives

Species Rich Grasslands are diverse in terms of native wildflowers and grasses. The aim is to create a healthy, thriving and biodiverse grassland within the green spaces and are to be kept free from invasive weeds for the benefit of wildlife and visual amenity.

4.9.2 Inspections

An annual inspection should take place to ensure the grassland is thriving and to identify areas that need further attention/ remedial works.

A report of the inspections and any defects requiring remedial work should always be logged.

4.9.3 Management Operations

The first stage of the maintenance operations should be to remove any litter, debris or deleterious materials and disposed of appropriately.

The management of the species rich grassland includes an annual 'hay cut' to a height of 150mm in September. A further cut in April may be necessary if the sward height reaches beyond 150mm. These operations should be carried out using a scythe or strimmer.

The grassland should be cut on a rotational basis, so only 50% is cut per year.

Any weed growth identified during the inspections should be removed using a hand hoe.

Any arisings that occur should be removed from site within seven days of the cut.

All works should be undertaken outside of the bird nesting period.

4.9.4 Proposed Species Rich Grassland: Maintenance Regime Table

Operation	Months												Notes
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Visual inspection				1									Carry out an annual inspection to review the establishment of the sward. Identify areas that require any remedial works.
Annual 'hay' cut				1					1				Carry out a yearly 'hay' cut in September to 150mm high once the grassland species have flowered. A further cut may be required in spring if the sward reaches beyond 150mm high.
Remove fallen leaves, weeds, debris, litter	1	1	1	1	1	1	1	1	1	1	1	1	Dispose leaves and weeds in an appropriate licensed green waste bin and remove litter from site.

Number of operations:

- 1 1 operation per month
- 2 2 operations per month
- 4 4 operations per month
- a/r As required

5 Handover Procedures

It is anticipated that the maintenance period will commence at Practical Completion and will run alongside the Rectification Period.

It is recommended that the landscape contractor is appointed for the maintenance contract to help streamline the Rectification Period and ensure defects are easily resolvable.

Following the expiry of the Rectification Period, the maintenance objectives identified in this report will need to stay in place to ensure the landscape establishes successfully and fulfils the planning obligations.

It is imperative that a continuous logged records of all inspections are clearly documented to ensure a smooth handover between the landscape contractor and future maintenance contractors.

6 Monitoring

It is recommended that annual inspections of all external 'public' areas is undertaken to ensure the quality and consistency of the maintenance regime is upheld and to identify any key objectives for the following year.

A written record of each inspection should be completed and reviewed on future visits to ensure targets and key management objectives are achieved.

The ideal time for carrying out the annual inspection is during the summer months when the plants are in full leaf.