

Landscape Management Report

Kingsmark Way, Goldthorpe (3456 501)

Prepared by



April 2020

Landscape Management Report

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1.0 Introduction

1.1 General

TPM Landscape have been commissioned by Countryside Properties Ltd to produce a landscape management report for the proposed residential development off Kingsmark Way in Goldthorpe. The landscape management report has been produced to ensure that future management objectives are achieved for the longevity of the project following practical completion. This document will form part of the planning application for the proposed development and once approved will provide guidance for the establishment, maintenance and future management of all external landscaped areas and planting around the site

1.2 Aims of the report

This report has been developed to establish long term management objectives and practices for all the 'public' external areas associated with the proposed residential development. The report presumes that all of the external elements have been built in accordance with the latest revisions of approved planning drawings;

- 3456 – 101 Landscape Layout
- 3456 – 201 Planting Plan
- 3456 – 202 Planting Plan
- 3456 – 203 Planting Plan

A clear understanding of the design aims and intentions will help to ensure that the landscape reaches maturity in the form in which it has been designed.

1.3 Site Maintenance and Responsibility

The company responsible for maintaining the landscape, including the streetscape (verges and tree planting), areas of public open space, swales, play areas, buffer planting and the Boundary Brook embankment will be responsible for inspecting the site and for keeping a logged record of inspections, faults and rectified works.

The client is required to appoint a Landscape Contractor, whether that is the original installation contractor or a separate, competent and appropriately certified contractor. It is recommended that the landscape contractor is BALI registered.

Objectives

The overall objectives for the maintenance of the landscape include the following;

- Maintain all grassed areas as healthy and neat lawns;
- Allow shrubs and flowers to reach their species potential to ensure that they produce flowers and seed heads and grow in their natural shape and form to provide texture and interest;
- Ensure that proposed and retained trees maintain a healthy and safe condition and are allowed to reach their potential form and characteristics;

- Keep all hard surfaced areas and paths in a good state of repair and free from any potentially dangerous arisings that could cause a slip or trip hazard or reduce visual quality;
- Ensure that all furniture and features are looked after and maintained in a good state of repair and safe condition so that they do not fail or have the potential to cause harm to users.

2.0 General Description

2.1 Existing Context

The proposal site is currently an open grass field with some scrub vegetation. Several informal footpath routes cut across the site linking to adjacent settlement and an existing tarmac path is located to the eastern part of the site which is on the alignment of the public right of way.

The site is located to the west of Kingsmark Way, which is accessed from Doncaster Road to the north. The site is surrounded by built form, comprising of residential settlement and small ancillary buildings. There is a recreation ground, consisting of a sports pitch, open informal recreation field and children's play area to the east of Kingsmark Way.

Existing tree cover is concentrated to the eastern boundary at the interface with Kingsmark Way and to the south at the interface with the dismantled railway.

2.2 Site Proposals

The development proposal is for a circa 116 dwelling residential development, with associated landscaping, open space, car parking and access roads.

Presuming all properties are occupied, the private gardens will be individually maintained by the resident. Communal areas including Public Open Space (POS) will be maintained by the Management Company.

This parcel of land incorporates an area of public open space to the southern part of the western edge of the site. The public open space comprises informal recreation opportunities, trees, ornamental shrubs, wildflowers and bulb planting with the access to the development consisting of more formal planting; ornamental shrubs, evergreen hedge and avenue trees. An existing tarmac footpath in the south east of the site is to be retained and linked into the development using proposed paths.

Soft landscape includes retained trees and hedges, ornamental shrub beds, tree planting, ornamental hedges, meadow planting, bulbs and amenity grass.

3.0 Health and Safety

The following potential hazards have been identified within the proposed development site which may have implications for maintenance operations:

- Contractors working on the site should make themselves aware of the location of underground services, defining the exact locations with the Statutory Authorities prior to commencing works below the surface;
- Working in areas used by residents and visitors; on foot, on bicycles, in wheelchairs and vehicles; ensuring surfaces are kept clear at all times and potentially dangerous tools or machinery are not left lying around.
- The use of chemicals known to be hazardous to humans and animals;
- Working at elevated positions;
- Working adjacent to and on highways;
- Lifting heavy objects and working with heavy machinery;
- The use of chainsaws, working at height and with heavy objects during tree works;
- The possibility that hazardous material may be deposited in or inadvertently left in areas requiring cleaning (glass, etc.);

Methods for reducing the potential site risks are well established and are common practice of competent contractors. The contractor is expected to identify the hazards associated with any maintenance operations they proposed, together with an assessment of the risks involved and methods for reducing the risks. The Risk Assessment should be recorded and retained for reference in the future if necessary.

3.1 Site Operations

All operations on site are to be carried out by suitably qualified operatives with appropriate safety clothing and equipment. The maintenance contractor is to adhere to the latest guidance on safe working practice, including information from the recognised industry body, the local authority and the government Health and Safety Executive. The maintenance contractor is to carry out all operations with regard to the safety and welfare of the general public, private and public property, domestic and native flora and fauna and Statutory Services.

3.2 Disposal of materials from site

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.

4.0 Hard Elements

Maintenance operations are to be carried out in order to provide a clean, inviting and safe environment for all users of the site. For the purposes of this report it is assumed that all the works required by the planning approval have been carried out in accordance with the approved drawings.

All paving, kerbs, edges, walls and street furniture should be fit for purpose, robust and in good condition. Any damage arising from the management and maintenance works must be reinstated to the original condition and in accordance with the relevant specification of the client.

All hard works to be installed under the recommendations of the manufacturer's instructions. Hard works should not be carried out in undesirable weather conditions.

4.1 Pedestrian Surfaces and Roads

Maintenance objective

Pedestrian surfaces and roads are to be maintained in a safe and clean condition free from any defects or debris which could potentially cause injury, inaccessibility or damage to vehicles. Surfaces are to be level and free from trip or slip hazards.

Inspections

A formal visual inspection is to be carried out by the maintenance contractor at 6 monthly intervals or following reports from the client / public that surfaces require repairing, cleaning or clearing following inclement weather. A report of the inspections and rectified works should always be logged.

An annual inspection of the paving jointing and overall uniformity should be carried out to ensure the stability of the footways is maintained.

Contractors Maintenance Operations

Surfaces are to be kept free of litter, mud, arisings, deleterious material, algae and hazardous obstructions. Surfaces are to be uniform in appearance, a level surface and constructed from a homogenous material, free from ruts, grooves, cracks, hollows and pot-holes (holes greater than 75mm in diameter and 10mm depth).

Paved areas are to be repaired within 1 week of a reported fault, unless the potential hazard is severe (trip hazard) in which case the area is to be cordoned off and repaired at the earliest available opportunity.

All surfaces and foundations are to be repaired to the original specification, unless otherwise agreed with the service provider.

One operation per month (within month / months specified) - 1

Two operations per month (within month / months specified) - 2

Four operation per month (within month / months specified) - 4

As required - a/r

Operation	MONTHS												Notes
	J	F	M	A	M	J	J	A	S	O	N	D	
Pedestrian Surfaces and Roads													
Visual inspection of footways, roadways and paving areas				1						1			Carry out 6 monthly inspections, report to be logged; any faults reported should be rectified as required.
General Cleaning of Paving	1	1	1	1	1	1	1	1	1	1	1	1	Keep surfaces free of litter, leaves, mud, arisings and any hazardous objects. Sweep and remove any arisings, keep all areas weed free. Any build up of moss or algae should be treated as required to ensure surfaces are not slippy or dangerous.
Clean paved areas annually by relevant washing techniques for varying materials e.g. granite/concrete						1							(acid and bleach should not be used)
Apply sealant to paving	a/r	a/r	a/r	a/r	a/r	a/r	a/r	a/r	a/r	a/r	a/r	a/r	(as required after cleaning)
Apply herbicide						1				1			Apply to weeds if appear between paving, when weeds have been suppressed hand hoe out and refill mortar joints
Repair	a/r	a/r	a/r	a/r	a/r	a/r	a/r	a/r	a/r	a/r	a/r	a/r	Repair surfaces when reported or inline with faults as identified in the inspections report. Repair to original specification. Check grouting to paving and reinstate where necessary
Ensure water is drained from footways to prevent pooling				1						1			When specified or as necessary after prolonged periods of wet weather

4.2 Metal / Timber Structures - Gates, Fences

Maintenance objective

Gates, fences are to be maintained in a secure, safe and clean condition and in good working order. Gates which are intended for controlled access only are to remain locked and should not be left open during the maintenance operations.

Inspections

A formal visual inspection is to be carried out at 6 monthly intervals or following reports from the client / resident that a fault or damage has occurred. A report of the inspections and rectified works should always be logged.

Maintenance Operations

Gates and fences are to be kept free of litter, deleterious material and hazardous protuberances. Surfaces and finishes are to be maintained uniform in appearance and coated in a homogenous paint, stain, enamel, or plastic coating in accordance with the original specification.

All items are to be repaired within 1 month of a reported fault, unless the potential hazard is severe, in which case the area surrounding the fault should be cordoned off and the boundary made secure, the fault should be repaired at the earliest available opportunity.

Repaint/stain railings and gates as required if the paint starts to flake off and look unsightly to the same specification as the original ensuring that any rust is removed and the surface prepared and primed before the paint is applied.

These works will be the sole responsibility of the contactor and at all times the boundaries should be maintained in sound condition.

One operation per month (within month / months specified) - 1

Two operations per month (within month / months specified) - 2

Four operation per month (within month / months specified) - 4

As required - a/r

Operation	MONTHS												Notes
	J	F	M	A	M	J	J	A	S	O	N	D	
Metal / Timber Structures – Gates, Fences													
Visual inspection of boundaries				1						1			Carry out 6 monthly inspections, report to be logged; any faults reported should be rectified as required. Repair if required
Clean metalwork						1							Carry out annually, removing dust and dirt being careful to not remove or damage surface finish.
Re-paint / Re-stain	a/r	a/r	a/r	a/r	a/r	a/r	a/r	a/r	a/r	a/r	a/r	a/r	As required following inspection
Strip back and repaint metalwork to match existing	a/r	a/r	a/r	a/r	a/r	a/r	a/r	a/r	a/r	a/r	a/r	a/r	Every 5 years or as required following inspection

4.3 Edges - Kerbs, Edging and Walls

Maintenance objective

All 'Edges' should be maintained in a safe and clean condition and fit for purpose. All cladding, copings kerbs and steps should be secure and firmly in place.

Inspections

A formal visual inspection is to be carried out at 6 monthly intervals or following reports from the client / resident that a fault or damage has occurred. A report of the inspections and rectified works should always be logged.

Maintenance Operations

All 'Edges' are to be kept free of litter, deleterious material and hazardous protuberances. Surfaces are to be maintained uniform in appearance and with seamless levels vertically and horizontally for copings and cladding. Grout mortar between kerbs, cladding and copings to be inspected and topped up where necessary with matching colour. Metal and timber edging to be neat and secured firmly in place and aligned straight or follow smooth uniform curves. Loose edging to be reinstated and secured. Any damaged edging to be removed and replaced with same specification.

Faults are to be repaired within 1 month of a reported fault, unless the potential hazard is severe, in which case the area surrounding the fault should be cordoned off, the fault should be repaired at the earliest available opportunity.

These works will be the sole responsibility of the contactor and at all times the edges should be maintained in sound condition.

- One operation per month (within month / months specified) - 1
- Two operations per month (within month / months specified) - 2
- Four operation per month (within month / months specified) - 4
- As required - a/r

Operation	MONTHS												Notes
	J	F	M	A	M	J	J	A	S	O	N	D	
Edges – Kerbs, Edging & Walls													
Visual inspection of edges				1						1			Carry out 6 monthly inspections, report to be logged; any faults reported should be rectified as required.
Clean edges						1							Carry out annually and remove detritus / chewing gum using a stiff brush and soapy water.
Apply anti-graffiti coating to raised edges if misuse becomes apparent						1							Carry out once a year or as necessary
Apply non residual herbicide				1						1			Apply herbicide to spot treat weed problems. Hand removal after herbicide has taken effect

4.4 Furniture

Maintenance objective

All furniture should be maintained in a safe and clean condition. Surfaces should be smooth to the touch (avoiding potential for splinters/ injury), fixings secure and flush with the finished surface. The wood structures should be sound avoiding the potential for failure due to rot.

Inspections

A visual inspection is to be carried out at 6 monthly intervals or following reports from the client / residents that a fault/ damage has occurred. A report of the inspection should be logged.

Maintenance Operations

Any timbers that have originally been stained should have the wood stain (or similar approved) reapplied annually in the spring to rejuvenate the appearance of the wood. The wood should be pressure treated timber, however if this is not the case then the wood should be treated with a wood preserver at least once every two years (this could be combined with the wood stain application if the colour or products matches the original specification).

The furniture should be repaired within 1 month of a reported fault, the section of wood/metal that is damaged or rotten should be replaced with a piece of timber/metal of the original specification. Where the fault may cause a risk to the user of the site the item should be cornered off until the fault is repaired.

One operation per month (within month / months specified) - **1**

Two operations per month (within month / months specified) - **2**

Four operation per month (within month / months specified) - **4**

As required - **a/r**

Operation	MONTHS												Notes		
	J	F	M	A	M	J	J	A	S	O	N	D			
Furniture															
Visual inspection of Furniture				1									1		Carry out 6 monthly inspections, report to be logged; any faults reported should be rectified as required.
Clean any metalwork						1									Carry out annually and remove detritus / rust.
Re-paint – Re-stain as required				1											Carry out once a year or as necessary

5.0 Soft Elements

For the purposes of this report it is assumed that all planting has been carried out inline with the approved planning drawings and any failed plants or trees replaced by the original contractor at the end of the 12 months Rectification Period (it is noted that the site is being developed over varying phases);

5.1 Existing Trees and Hedgerows

Objectives

Retain all existing trees and hedges as indicated in the approved plan to preserve their contribution to the visual amenity and enclosure of areas. Ensure the existing hedge is cut annually to retain a buffer along the boundaries.

Inspections

Existing trees and hedges should be inspected annually and gaps should be recorded which need filling with additional plants or trimming to encourage growth to fill gaps. Record if there are any areas of significant failure to thrive which may require remedial works to the soil.

Maintenance Operations

Any hedge or tree works should be carried out between August-February to avoid the bird nesting season. Lightly trim the tops and sides of existing hedge on an annual basis to desired height and width, or to prevent blockage to pedestrian access and lighting to areas. Avoid trimming the hedge, when full of berries, to preserve its ecological value and valuable food source to wildlife.

One operation per month (within month / months specified) - **1**

Two operations per month (within month / months specified) - **2**

Four operation per month (within month / months specified) - **4**

As required - **a/r**

<u>Operation</u>	MONTHS												Notes
	J	F	M	A	M	J	J	A	S	O	N	D	
Existing Hedgerow and Trees													
Visual inspection of hedge								1					Inspect hedge for signs of disease, damage or as required following adverse weather. replant if necessary
Remove dead, diseased or damaged limbs to promote a healthy shape to the hedge								1					Avoid bird nesting season
Prune to retain shape								1					Avoid bird nesting season

5.2 Proposed Trees

For the purpose of this report it is assumed that all planting and initial tree works have been carried out in line with the approved planning drawings and any failed [plants or tree replaced by the original contractor at the end of the 12 months rectification period.

Objectives

Trees will play an important role in providing structure to the landscape proposals and will provide a valuable asset to the site, provide screening, structure and contribute to the visual amenity of the local area. Therefore, it is important that they are given the best chance of successful establishment.

Inspections

Inspect on an annual basis when the trees are in full leaf to ensure that the trees are thriving, and record defects requiring remedial works.

Maintenance Operations

Newly planted trees take some time to establish, and until this occurs, they are subject to competition from weeds. Any weeds should be removed by hand from the base of each tree and 75mm deep mulch maintained around the trunk. For woodland areas weed growth may be removed by applying a herbicide spray to the base of saplings during autumn or early spring before trees are in leaf.

If the trees show signs of poor growth or reduced vigour an application of the appropriate fertiliser can be applied. If the trees do not respond to a treatment of fertiliser, further investigations should be carried out, including the ground conditions for signs of compaction, contamination, poor quality topsoil. Remediate any problems uncovered with the soil. Should the remediation works not resolve the problem a replacement tree may need to be planted to replace the dead/dying tree.

During establishment trees will require regular watering particularly during prolonged dry periods. Mulch should also assist in retaining moisture within the soil. Water the trees minimum once a week during periods of limited rainfall over May-September (during the first full growing season) ensuring that the soil is fully saturated. Ensure all irrigation pipes are free from debris. Water shall be applied at 40litres per individual tree. Where water restrictions apply (hosepipe bans, drought orders) an alternative supply of water shall be used if possible.

Tree ties should be inspected twice annually as part of the general maintenance visits and adjusted accordingly. Damaged ties or stakes should be replaced. When the trees are established and can support themselves the ties should be carefully removed, and the stakes cut down to ground level. This operation is likely to be required after 3 to 5 years dependant on establishment rates, stability and growing conditions. Underground tree guys, tree stakes and tree ties should be inspected twice annually as part of the general maintenance visits and adjusted accordingly. Damaged guys/ties should be replaced. Guys/ties will require adjusting as it is likely to take 3 to 5 years for the trees to establish dependant on stability and growing conditions.

Pruning of young trees should not generally be required unless they have dead or diseased branches. In such cases the tree branch should be pruned back (using a sharp clean knife) to an outward facing bud whilst maintaining the natural shape of the tree.

These works will be the sole responsibility of the contractor and at all times trees should be maintained in good health and in a safe condition.

One operation per month - 1

Four operations every month – 4

Operation	MONTHS												Notes
	J	F	M	A	M	J	J	A	S	O	N	D	
Proposed Trees													
Visual inspection of trees					1								Inspect trees for signs of disease, damage or as required following adverse weather. Replant if necessary.
Slow release fertiliser					1								Only when necessary.
Weeding/ mulch				1	1	1	1	1	1				Remove weeds and top up mulch (mulch topped up once annually) to retain a weed free around the base of each tree.
Tree stakes and ties				1					1				Check and adjust, replace or remove as required until the tree has established. Check and re-adjust after strong winds. Remove in year 3-5 or as required.
Tree guying				1					1				Repair and adjustment. Check and re-adjust after strong winds
Watering					4	4	4	4	4				Water once a week during the growing season and as necessary in periods of drought only during the first 2 years until the trees have established.
Routine pruning				1					1				Should not be required for the first few years, after which pruning should only include the removal of dead or diseased branches.

Deadwood				1					1			Large woody material (girth of over 10cm) should be collected to create log piles within the woodland areas. Other deadwood to be retained unless cause identified as being due to disease or if the deadwood poses a risk to public safety
Tree Replacements	1	1								1	1	Any trees that have failed should be replaced to the original specification and planted within the next planting season.

5.3 Proposed Hedges

Objectives

Hedges will help to define the edges of spaces and route ways and create enclosure to spaces.

Inspections

Inspect the hedges annually and record gaps which need filling with additional plants or trimming to encourage growth to fill gaps. Record if there are any areas of significant failure to thrive which may require remedial works to the soil.

Maintenance Operations

Do not trim the top of formal hedges until they have achieved the desired height of 120cm. Until the desired height has been achieved trim the sides of the hedges to promote dense growth. Trim on an annual basis during the spring to promote bushy growth during year 1-4.

After the hedges have established lightly trim annually back to the desired height. To prevent weed growth, maintain a 75mm depth of bark mulch at the base of the hedge until the hedge has established, fertiliser application should be avoided unless there are specific localised areas of poor growth.

During establishment hedges will require regular watering particularly during prolonged dry periods. Water min once a week during periods of limited rainfall over May-September (during the first full growing season) ensuring that the soil is fully saturated.

These works will be the sole responsibility of the contactor, the hedges should not be allowed to exceed the height as specified above to ensure visibility and safety across the site is not compromised.

One operation per month (within month / months specified) – 1.

Four operation per month (within month / months specified) - 4

Operation	MONTHS												Notes
	J	F	M	A	M	J	J	A	S	O	N	D	
Hedges													
Visual inspection of hedges				1					1				Inspect hedges for signs of disease, damage or as required following adverse weather. replant if necessary
Inspect hedges after strong winds (as required)	a/r	a/r	a/r	a/r	a/r	a/r	a/r	a/r	a/r	a/r	a/r	a/r	Repair and adjustment. Check and re-adjust after strong winds and firm ground at base
Watering					4	4	4	4	4				Water once a week during the growing season and as necessary in periods of drought only during the first 2 years until the trees have established.
Replace dead and dying hedges to original specification during the next planting season	1	1									1	1	Any hedge plants that have failed should be replaced to the original specification and planted within the next planting season.
Remove and dispose of accumulations of winter leaves											1	1	To be carried out to reduce risk of slipping and to maintain a tidy environment
Weed control and tidying at base of hedge					1		1						Remove and dispose of weeds
Hedge trim				1					1				Should not be required for the first few years, after which pruning should only include the removal of dead or diseased branches.
Fertiliser	a/r	a/r	a/r	a/r	a/r	a/r	a/r	a/r	a/r	a/r	a/r	a/r	Apply an appropriate fertiliser as required to aid establishment if the hedge is showing signs of stress (i.e. defoliation, die back)

5.4 Proposed Ornamental Shrub Beds

Objectives

The shrub beds should have total vegetation cover with no gaps as they establish in order to minimise maintenance requirements, and to provide a neat and tidy appearance to the proposed landscape setting. The pruning operations should be carried out under guidance of a horticulturally qualified manager, with a view to allowing the shrubs and herbaceous plants to achieve their species potential in terms of form, flower and structure.

Inspections

Inspect the shrub beds annually and record gaps which need filling with additional plants, areas thinned, or pruning operations to encourage growth to fill gaps. Where there has been a significant failure of plants to thrive, carry out investigations to locate the source of the problem and consult the landscape architect prior to replacement planting.

Maintenance Operations

Newly planted areas take some time to establish. Until this occurs, young plants are subject to competition in their root zone from weeds. During this time weeds should be removed by hand and the bark mulch should be maintained to the original specified depth (75mm) until the canopies meet. After which weed growth should be more suppressed and only localised weeding should be required.

During establishment all the plants will require regular watering particularly during prolonged dry periods. Water the shrub beds min once a week during periods of limited rainfall over April-September (during the first full growing season) ensuring that the soil is fully saturated. Watering should be undertaken by low pressure hose sprinkler or evenly sprayed over the whole area at a rate of 25litres/m². Ensuring watering is not undertaken during the heat of the day to avoid scorching of the plants.

Shrubs which grow over paths or obscure sight lines should be pruned. Should individual species grow excessively during the first five years, pruning should consist of the removal of individual branches to maintain the natural shape of the plant or selective thinning.

Routine annual pruning of shrubs should not be required within the first three years, although some of the herbaceous plants and flowering shrubs should be maintained in accordance with the list below to encourage new growth and longer flowering periods;

Herbaceous Plants General; these are the plants which generally have soft stems and will die back in the winter months. Any dead stems and leaves should be tidied up in the spring when the threat of frost has gone. Old and dead vegetation can be cut with secateurs back to the base or gently pulled by hand, to encourage the new growth to push through, arisings should be disposed of in the green waste. Allow seed heads to remain on the plants for winter interest and insect habitats. Some herbaceous plants can be spilt and replanted if they start to become open or scruffy.

Some of the more prolific early summer flowering plants will benefit from a light prune after flowering to encourage a second flowering in early autumn, prune the plants back to young new leaf growth removing all of the old flower heads.

Grasses; Seed heads on the grasses should be allowed to remain on the plants throughout the winter for visual interest. In the spring for deciduous grasses cut back old seed heads and any dead vegetation to encourage new growth.

Specimen shrubs in planting beds; allow the shrubs to establish as individual specimens, in the case of the multi stemmed woody shrubs clear leaves from the base to allow herbaceous vegetation and shrubs to establish underneath.

Cornus; The shrubs should be reduced in height to 300mm every three years in the spring to encourage strong stem colour and vigour

One operation per month (within month / months specified) - **1**

Two operations per month (within month / months specified) - **2**

Four operation per month (within month / months specified) - **4**

As required - **a/r**

Operation	MONTHS												Notes
	J	F	M	A	M	J	J	A	S	O	N	D	
Proposed Shrub Beds													
Visual inspection of Shrubs and Perennials				1					1				Inspect Plants for signs of disease, damage or as required following adverse weather. replant if necessary
Hand Weed				1	2	2	2	2	1				Hand weed beds upto once a fortnight during the summer months, remove weeds and tidy up the bark mulch surface. If necessary treat prolific weeds with a non residual glyphosate based herbicide, ensure that after the weeds have died they are removed to prevent the bed from looking unsightly.
Watering					4	4	4	4	4				Water once a week during the growing season as necessary in periods of drought only during the first two years until the shrubs have established.
Mulch				1									Top up mulch in the spring once the bed has been weeded, this should not be required after year 3-5 when the planting has established.
Plant replacement	1	1									1	1	Replace dead and dying plants to original specification during the next planting season
Remove dead foliage and old flower stems	a/r	a/r	a/r	a/r	a/r	a/r	a/r	a/r	a/r	a/r	a/r	a/r	Remove and dispose of foliage and stems. If diseased remove as necessary as soon as possible.

Apply slow release fertiliser				1									Only if plants have shown signs of poor health in the previous season. Apply a slow release fertiliser or well rotted manure in the spring.
General pruning				1									Should not be required in the first 1-3 years, however remove any branches that are obstructing paths, growing into the grassed areas or taking over other plants in the bed.
Selective thinning				1									In year 5 when the plants have established, thin out plants if overcrowded in the bed.
Plant specific maintenance				1									For maintenance of Cornus and Viburnum carry out specific maintenance operations as fully described in item 5.5
Clear snow	a/r	a/r	a/r	a/r						a/r	a/r	a/r	Remove snow from foliage after excessive fall if weight of accumulation may cause damage

5.5 Proposed Grassed Areas

Objectives

Grassed areas should be well maintained at all times as overgrown and patchy grass can be unsightly.

Inspections

Lawn and grassed areas can be inspected as part of the regular maintenance operations, although they should be formally inspected annually to assess requirements in terms of topdressing, over seeding etc.

Maintenance Operations

Remove any litter or before cutting. Arising's should be removed from site.

The sward should be cut to maintain the grass between 25mm and 50mm height. The grass should be cut min 12 times per year during the growing season which may require fortnightly cuts during some months.

A fertiliser application to be applied only as required, either as a spring feed for shoot growth or as an autumn feed for root growth using the appropriate feed application.

In addition, these applications should compensate for any areas of poor growth or excessive wear. An application of selective herbicide should be made during early summer to prevent any weed species from having a detrimental affect to the appearance of the sward and to prevent any infestation becoming severe.

In periods of dry weather conditions, it may be required to water the lawn at a rate of 15litres/m2. Ensuring watering is not undertaken during the heat of the day to avoid scorching of the grass.

Other maintenance applications which will be required from time to time include the following: topdressing, overseeding, scarifying, spiking etc to alleviate common problems such as thatch, compaction, poor drainage, malnourishment etc. These items should be addressed in the annual check.

These works will be the sole responsibility of the contactor.

One operation per month (within month / months specified) - **1**
 Two operations per month (within month / months specified) - **2**
 Four operation per month (within month / months specified) - **4**
 As required - **a/r**

Operation	MONTHS												Notes
	J	F	M	A	M	J	J	A	S	O	N	D	
Grassed Areas													
Inspection				1									Carry out an inspection of the establishment of the grass sward to identify any damaged areas, excessive weed growth, poor grass cover etc which may require remediation works over the coming year.
Cut				1	2	2	2	2	2	1			Cut grass to 25-50mm with an appropriate mechanical mower, remove all arisings.
Cut edges				1	2	2	2	2	2	1			Edges to paths and shrub beds to be cut with a neat edge avoiding damage to the shrubs and tree trunks and the arisings removed from the beds or swept off the paths and disposed of in a licensed tip.
Reform Edges				1				1					Twice a year the soft grass edges should be redefined with a half moon spade to form neat straight edges and any grass encroaching onto footpaths taken back
Apply fertiliser application				1						1			Once in the spring and once in the summer as required
Topdressing, over seeding, scarifying, spiking	a/r	a/r	a/r	a/r	a/r	a/r	a/r	a/r	a/r	a/r	a/r	a/r	As required if identified in the annual inspection
Remove fallen leaves, debris and litter	1	1	1	1	1	1	1	1	1	1	1	1	Remove prior to cutting (do not blow or sweep into adjacent planting beds)

5.6 Proposed Wildflower Meadow

Objectives

To create and maintain a biodiverse and balanced wildflower meadow that is free from invasive weeds for the benefit of wildlife and visual amenity. A mix will include 20% flowers and 80% grasses, and the mix selected to be appropriate to the location.

Management Operations

The following information has been extracted from the *Germinal Seeds Wild Flora Mixtures Maintenance Guide*. For comprehensive details on the preparation, sowing, establishment and management of the specified wildflower meadow seed mixture refer to the Guide in full and the Germinal Seeds Website. In some instances, below the text is shortened or para-phrased for brevity.

During the first year of establishment, competition from grasses and weeds will need to be kept under control. It is essential, particularly in the first twelve months to manage the sward to aid seedling development and maintain a balanced composition from one year to the next. Allow the arising to settle (for insects to disperse) before removing the arising off site in a licensed tip (green waste).

Autumn Sown:

The first cut should be carried out once the sward exceeds a height of 10cm (late March / early April). The cut should be to a height of 4-7cm.

A second cut could be required if re-growth exceeds 10cm by the end of April/early May.

After flowering, (September/October) cut to 4-7cm and removing clippings.

Thereafter during the following year, (March /April) cut the sward to 4-7cm, removing all excess grass, with a following cut after flowering (September / October), removing all clippings.

Spring Sown:

Six weeks after sowing cut to 4-7cm where there is sufficient material.

In May cut to 4-7cm once sward exceeds approximately 10cm high.

After flowering, (September/October) cut to 4-7cm and removing clippings

Thereafter during the following year, (March /April) cut the sward to 4-7cm, removing all excess grass, with a following cut after flowering (September / October), removing all clippings.

Where the meadow areas are close to the paths maintain a min 1m wide regularly mown strip between the path and the meadow, incorporating this area into the amenity grass areas.

One operation per month (within month / months specified) - **1**
 Two operations per month (within month / months specified) - **2**
 Four operation per month (within month / months specified) - **4**
 As required - **a/r**

Operation	MONTHS												Notes
	J	F	M	A	M	J	J	A	S	O	N	D	
Proposed Wildflower Meadow													
Inspection of Meadow				1									Carry out an inspection of the establishment of the sward to identify any damaged areas, excessive weed growth, poor cover etc. which may require remediation works over the coming year.
Cut (If Autumn sown)				1					1				Cut grass to 40 - 70mm with an appropriate mechanical mower, remove all arisings.
Cut (if Spring sown)					1				1				Cut grass to 40 - 70mm with an appropriate mechanical mower, remove all arisings
Inspect for weed growth and hand weed where necessary				1		1		1					Hand hoe out any weeds and remove
Remove fallen leaves, debris and litter	1	1									1	1	Remove prior to cutting (do not blow or sweep into adjacent planting beds)

5.7 Bulb Planting

Objectives

To ensure bulbs thrive within lawned areas providing seasonal interest at key locations within the public spaces

Inspections

Bulb planting in grassed areas can be inspected as part of the regular maintenance operations associated with the lawn maintenance. They should be formally inspected annually to assess requirements in terms of gaps, flower quality, etc.

Maintenance Operations

Where grass areas are planted with naturalising bulbs, the grass will be cut 6-8 weeks after the bulbs have flowered to allow sufficient time for the bulb to regain the necessary nutrients to ensure it will flower the following season. Normal mowing will then resume until the bulbs start to reappear. Apply fertiliser if required towards the end of February if required.

One operation per month (within month / months specified) – **1**
 Two operations per month (within month / months specified) - **2**
 Four operation per month (within month / months specified) - **4**
 As required - **a/r**

Operation	MONTHS												Notes
	J	F	M	A	M	J	J	A	S	O	N	D	
Bulbs													
Inspect Bulbs During Flowering Season			1	1	1								Visual inspection to identify any issues
Cut back foliage after 6-8 weeks after flowering ends					1	1	1						Season varies depending on species and cultivar
Apply fertiliser if required		1											To promote healthy growth

6.0 Handover Procedures

The maintenance period will run concurrently with the rectification period so it may be prevalent to have the same contractor for both the construction side of the operations and the Maintenance Contractor, to help avoid disputes. After the rectification period the management and maintenance objections need to remain in place for the following operational years of the development site.

To ensure a smooth handover between management contractor companies a clearly documented record of works will be required.