LANDSCAPE MANAGEMENT AND MAINTENANCE PLAN

KILLINGDOWN FARM, CROXLEY FARM



LANDSCAPE MANAGEMENT AND MAINTENANCE PLAN

Guide to the Management of Landscape Areas for

Killingdown Farm, Croxley Green,

Document Reference: 1945-GUA-DOC-L-002

ON BEHALF OF

Hill Residential Ltd.

July 2020



Revision	Date	Prepared	Approved	Comments
P07	17.11.2022	JH	RM	Revised to removal of H007
P06	14.04.2021	RM	СХ	Revised to new layout
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P04	07.08.2020	RM	СХ	Red line boundary revised
P03	06.08.2020	RM	СХ	Management Areas Plan Updated

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INTRODUCTION

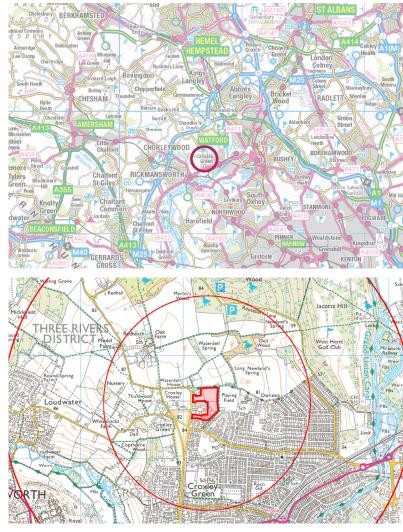
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1. INTRODUCTION

- 1.0.1 Guarda Ltd has been commissioned by Hill Residential Ltd. to prepare this Landscape Management and Maintenance Plan. It sets out the maintenance operations required for the satisfactory management of the landscape within the public spaces associated with the development at Killingdown Farm, Croxley Green.
- 1.0.2 The landscape proposals and long-term management goals respond to the specific character of the existing site and surrounding landscape within the Village of Croxley Green and South West Hertfordshire. The location and description of the site can be found on page 6.
- 1.0.3 The **Management Areas and Responsibilities Plan** on page 9 shows the landscape areas which are covered by this Landscape Maintenance and Management Plan (Figure 3). These areas include existing vegetation and trees along with all new planting and other hard or soft landscape components outside of private gardens.
- 1.0.4 The **Implementation Programme and Recitals** sections of this document define the parties who are involved in and responsible for the implementation and maintenance of the landscape within the public spaces and how the proposals will be implemented.
- 1.0.5 Within the **Maintenance Operations** section of this document each landscape component is described and the management objectives defined. General maintenance actions are set out to ensure the long-term management of the landscape for users and wildlife. This section is accompanied by easy-to-read schedules to aid in the on-

site application of the operations. The focus of this section is to ensure that the site is safe, comfortable, attractive, biodiverse and sustainable and contains instructions for the management of the following landscape elements:

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Figures 1 and 2 - Location plans showing Croxley Green within it's context of South West Hertfordshire and the site in relation to the Village of Croxley Green.

1.1 LOCATION

1.1.1 The Site is situated on the northern edge of Croxley Green, a village and large suburb of Rickmansworth in Hertfordshire. The Site is situated in the authority area of Three Rivers District Council. The site lies on the northern edge of the village to the east of Little Green Lane. The Site adjoins existing development associated with Baldwins Lane and Grove Crescent to the south, a school playing field to the east and countryside within the Metropolitan Green Belt to the north.

1.2 DEVELOPMENT DESCRIPTION

- 1.2.1 The development proposals are for 160 residential properties with a mix of dwellings (two to five bedrooms) with both detached and semi-detached two storey houses and thee apartment blocks with associated access roads, driveways and gardens.
- 1.2.2 Access will be provided into the main, northern part of the Site from a new junction off Little Green Lane with links to a local network of shared streets and spaces with access to a single dwelling off Little Green Lane (further north) and new access to the southern part of the site forming a discreet cul-de-sac.
- 1.2.3 Public Open Spaces are proposed throughout the site in the form of small doorstep play spaces 'LAPs', a central open space 'LEAP' and along the footpath on the eastern boundary of the Site.
- 1.2.4 Boundary trees and hedgrows are retained with category A trees retained within the development. Tree and hedgerow planting is proposed to provide further structure.
- 1.2.5 An attenuation area to the north of the site is proposed as part of the sustainable drainage strategy for the Site (SuDS) and designed to maximise ecological mitigation.

1.3 PLANNING CONTEXT

- 1.3.1 The site is allocated for up to 180 dwellings following its release from Green Belt as defined in the Three Rivers District Council's Site Allocations document (Housing Allocation H10). The northern part of the Site, to the north of Little Green Lane, is situated within the Green Belt.
- 1.3.2 The landscape proposals and this maintenance and management plan provide the information required as set out within the adoped validation checklist (March 2020) which states:
 - 'Where applicable a hard and soft landscaping scheme should be submitted, in accordance with Policy DM6 of the Development Management Policies LDD...'
 - *'… Long term maintenance plans should be provided where land forming communal facilities (not to be adopted by the Council) will need to maintained to a particular standard to secure the long-term amenity of the area.'*
 - 'Landscape management plans may be required for larger sites where longer term management needs to be secured, e.g. the management of woodlands, areas important to wildlife and areas linking into green infrastructure....'
- 1.3.3 This management plan also:
 - 'Demonstrates that existing trees, hedgerows and woodlands will be safeguarded and managed during and after development in accordance with the relevant British Standards' (DM6 f).
 - *'Provid[es] for the management of habitats and species' (DM6 d).*
 - 'Hav[ing] regard to the local context and conserve or enhance the character, amenities and quality of an area' (CP12)

1.4 AIMS AND OBJECTIVES

- 1.4.1 **The sustainable management of existing vegetation**: To retain existing trees and hedgerows as outlined in the arboricultural impact assessment, and to enhance their character, composition and age structure through positive management with consideration to long-term viability and health and safety as per DM6,f.
- 1.4.2 **To maintain landscape character:** through incorporating locally indigenous species within screening/structural landscape areas and providing an attractive and robust landscape setting for the buildings on the site and reinforce local distinctiveness;
- 1.4.3 **To achieve a high standard of maintenance:** To take measures to ensure the successful establishment and growth of new structural and incidental planting and to take appropriate long-term management measures to ensure the satisfactory appearance and sustainability of vegetation. To ensure that landscape components are replaced, augmented and/or improved over time as appropriate;
- 1.4.4 **To maintain and enhance biodiversity:** To protect and enhance the nature conservation interest of new habitats and to ensure the adoption of management practices that enhance the biodiversity value of the site. To fulfill all legal requirements in relation to the protection and management of ecological features and the protection and management of target species including bats and reptiles.
- 1.4.5 **To ensure health and safety:** To uphold the duty of care that all landscape components are safe and that all reasonable steps are taken to minimise risk of injury and damage to people and property.

1.5 RECITALS

- 1.5.1 The main parties involved include the following:
 - **The Developer:** Hill Residential Ltd. is responsible for the construction of this development. This will include the protection and management of existing landscape components through the construction phase and the implementation of the hard and soft landscape works in accordance with the planning drawings, including any contractual maintenance period associated with these works.
 - **The Local Planning Authority:** This term (abbreviated to LPA) shall refer to Three Rivers District Council and its Planning and Landscape Officers who are involved in the process of the approval of landscape and other documentation.
 - The Adopting Organisation: This is the organisation that will adopt ownership of the landscape areas and is therefore responsible for their management and maintenance including all landscape components and features within them. The Adopting Organisation for the site will be LPA or a nominated management company. The Adopting Organisation shall also be taken to mean any employee or representative of the organisation in ownership of the grounds.
 - The Landscape Management Contractor: the company who may be appointed by the Adopting Organisation to carry out the landscape maintenance works.

1.6 SUPPORTING INFORMATION

1.6.1 The Management Plan shall be taken to include this document and any supporting plans, reports and specifications approved as part of the planning application for the residential development of land at Killingdown Farm, Croxley Green.

1.6.2

1945-GUA-DR-L-004, 005, 006, 007, 008, 009, 010, 011, 012, 013 LANDSCAPE PROPOSALS, 014 LANDSCAPE MASTERPLAN & 015 SOFT LANDSCAPE SCHEDULE AND OUTLINE SPECIFICATION BY GUARDA LANDSCAPE.

1945-GUA-DOC-L-001 LANDSCAPE AND VISUAL BASELINE APPRAISAL AND RECOMMENDATIONS BY GUARDA LANDSCAPE.

ARCHITECTURAL LAYOUT BY HILL RESIDENTIAL LTD.

ECOLOGICAL IMPACT ASSESSMENT BY MD ECOLOGY

TREE SURVEY, ARBORICULTURAL IMPACT ASSESSMENT PRELIMINARY ARBORICULTURAL METHOD STATEMENT & TREE PROTECTION PLAN BY HAYDENS ARBORICULTURAL CONSULTANTS.

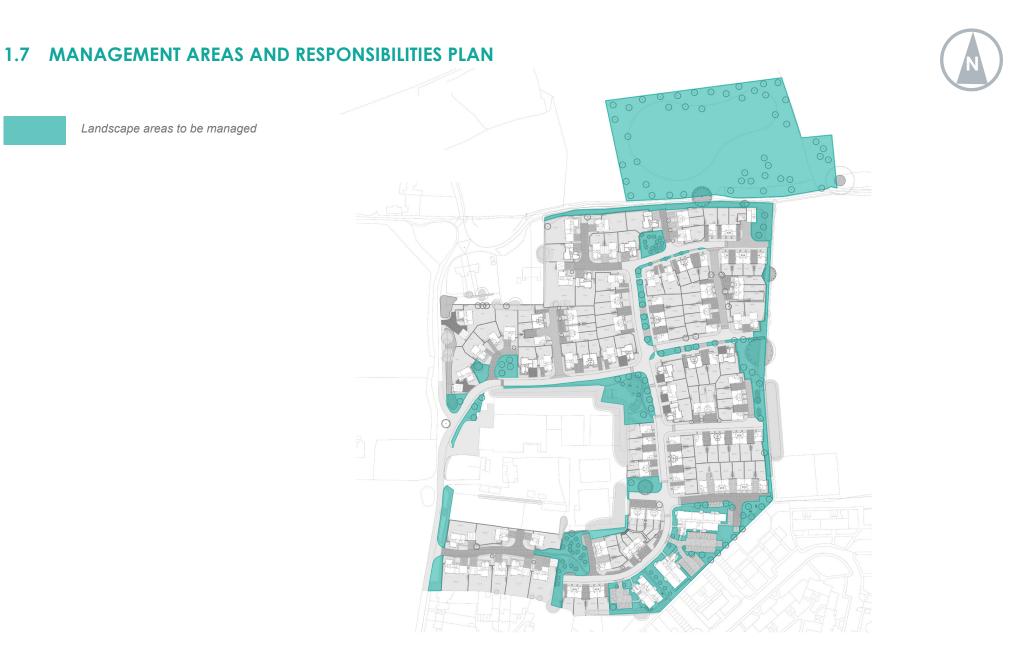


Figure 3 - Landscape areas encompassed within this maintenance and management plan

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2. IMPLEMENTATION PROGRAMME

2.1 IMPLEMENTATION

- 2.1.1 All planting works shall be carried out in accordance with the approved details unless otherwise agreed with the LPA.
- 2.1.2 The planting on plots is to be completed prior to the occupation of the respective dwelling or as conditioned by the LPA.

2.2 IMPLEMENTATION OF MAINTENANCE

OPERATIONS

- 2.2.1 The Landscape Management Contractor as appointed by the Adopting Organisation(s) will adhere to this Landscape Management Plan and the accompanying maintenance schedules.
- 2.2.2 The Landscape Management Contractor will carry out general maintenance operations. Specialist Contractors may be used on an as needs basis to complete specialist operations and/or occasional works.
- 2.2.3 All works, materials and operations will be in accordance with relevant legislation, British Standards, Regulations (including the CDM Regulations) and Codes of Practice.

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3. MAINTENANCE OPERATIONS

3.1 EXISTING TREES AND VEGETATION

- 3.1.1 The arboricultural report and plans detail the existing condition, protection and any required works/ removal of existing trees and vegetation on site:
 - Tree Survey, Arboricultural Impact Assessment Preliminary Arboricultural Method Statement & Tree Protection Plan by Haydens Arboricultural Consultants.
- 3.1.2 Existing trees and vegetation are incorporated into the landscape proposals for the site.
 - Existing hedgerows and associated trees are retained on the western boundary (A002, T003, T004, T005, T006) along Little Green Lane; against the boundaries of 1-5 Croxley Green to the north west of the site (T007, T008, H003, T009, H002, T010, H005 & T019); Along the northern boundary of the site with Little Green Lane (A001, T015, T016, T017); along the eastern boundary (T014, T013, T012, A001, H008).
 - Hedgerows and trees are retained on the boundary of Killingdown Farm. This includes a large conifer hedge H009.
 - Existing trees are retained within open space within the proposals (T001, T025).
 - Existing vegetation is to be retained on the boundaries of the attenuation area and on the northern boundary of Little Green Lane (not included within the AIA).

3.1.3 Management Objectives:

- Maintain the trees in as healthy and attractive condition to ensure their contribution to the landscape structure, biodiversity, and screening/amenity value of the site; and
- Ensure that trees are healthy and safe, particularly in places in proximity to residential properties and with public access.
- 3.1.4 Trees should be visually checked once a year for the presence of any diseased or rotten wood; fungal or other infections/ disease; and stability. If any such issues are identified, then the advice of a qualified Arboriculturist should be sought.
- 3.1.5 Tree replacement and enhancement of tree cover:
 - Any tree that dies or is unnecessarily felled, but which is not removed as part of a programme of thinning or coppicing, shall be replaced with a specimen of similar species and stock size so as to maintain the character and ecological value of the site. Where disease has caused the loss of the tree, care must be taken in the selection of an appropriate alternative species, taking into account the local context, character of nearby trees, the potential impact on nearby buildings/services, and the potential susceptibility of the replacement tree to the diseases.

All works should be carried out in accordance with "Appendix 1. Guidance Note for Maintenance Practice" on page 27 "Schedule 1. Existing trees and vegetation maintenance schedule." on page 14

3.1.6 Pruning Native Hedges:

- Cut on a three year cycle (one side,top, other side) which will allow time for flowering and fruiting shrubs to develop throughout the length of the hedge and is the most beneficial for wildlife.
- Boundary hedgerows should be maintained to a minimum height and width of 3m. Existing hedgerows on the northern boundary should be maintained to a height of 5m to provide screening value.
- Where the space and character allows, leave a 2m wide uncultivated zone from the middle of the hedge to aid in biodiversity.

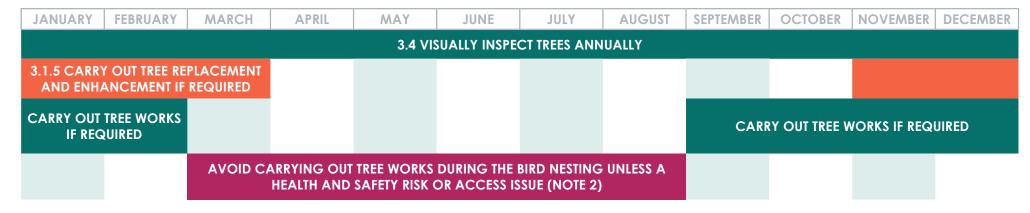
3.1.7 Gapping up native hedges:

• Remove and replace failing plants with a plant of the same species and specification. Gap up areas of less dense growth with additional plants as required to achieve a continuous hedge

Schedule 1. Existing trees and vegetation maintenance schedule.

alignment.

• Old, gappy hedges can also be rejuvenated by laying or coppicing (cutting stems down to 10-15cm above ground level).



Carry out all works in accordance with "Appendix 1. Guidance Note for Maintenance Practice" on page 27 and "Schedule 4. Softworks maintenance schedule." on page 20

3.2 PROPOSED TREE PLANTING

3.2.1 Native trees are proposed within the open spaces, along the boundaries of the site and within the attenuation area. Fruit trees are proposed within two orchard LAPs. Ornamental and street trees are proposed within the residential areas to provide amenity value, shade and a leafy character to streets.

3.2.2 Management Objectives:

- Ensure the satisfactory establishment and growth of new tree planting so that trees are healthy and safe.
- Care for trees for the long term visual amenity, character and biodiversity of the site.

3.2.3 General tree maintenance during establishment

- Firm in unstable trees in the ground especially after frost and strong winds.
- Check and adjust tree ties, replacing tight or damaged ties in a slightly different position.
- Top up bark mulch levels to a depth of 75mm within a radius of 500mm of the tree stem and remove any weed growth around the tree by hand.
- Fertilise using a suitable and approved liquid feed during early May and again in late September.
- Prune back any diseased or rotten wood (including the removal of main stems and limbs) back to sound wood as required.
 Pruning should be carried out in accordance with BS 7370-4:1993. Remove all cut material from site.

- Prune young trees to encourage a strong leader and an even open crown.
- Inspect for pests and diseases and ensure remedial action is taken. (Note 4)
- Water trees during dry periods, until trees are successfully established. (Note 5)

3.2.4 Remove tree stakes and ties

 Remove stakes and ties between 4 to 6 years after planting, but be sure trees are firm and stable. Stakes should be removed from the ground and the post holes filled with suitable topsoil. If the tree is found to be weak or unstable after the stakes have been removed, then check the base of the tree for signs of rot. If rotten or unlikely to stabilise, remove the tree and replace. If the tree is free from rot or other cause of its instability, then reinstate a tree support.

3.2.5 Tree Replacement

• Failing trees are to be replaced with a specimen of similar species and stock size to maintain the character and ecological value of the scheme. Where disease has caused the loss of the tree, care must be taken in the selection of an appropriate alternative species, taking into account the local context, character of nearby trees, the potential impact on nearby buildings/services, and the potential susceptibility of the replacement tree to the disease.

3.3 PROPOSED NATIVE BUFFER/ SHRUB MIXES

3.3.1 Native shrub planting has been proposed within the attenuation area and incidentally within open spaces for screening and ecological benefit. Native species provide habitats and foraging for wildlife, particularly amphibians and reptiles, including flowering and fruiting varieties.

3.3.2 Management Objectives:

- Ensure the satisfactory establishment and growth of new planting.
- Maintain planting in a healthy and attractive condition and enhance the value of planting as a food and sheltering source to wildlife; and
- Ensure continuity of the design approach and amenity value.

3.3.3 General Maintenance:

- Firm in and straighten any loose plants when necessary.
- Top up bark mulch levels to maintain a depth of 75mm using the same or similar product to that previously supplied for the first 3 years and remove any weed growth.
- Check rabbit guards/fencing and canes regularly. Remove guards after 2-3 years when plants are growing strongly.
- Watering: For the first year after planting, water shrubs and whips during dry periods. Water all shrubs to field capacity. Apply water as required during any continuous hot weather. (Note 5)

Carry out all works in accordance with "Appendix 1. Guidance Note for Maintenance Practice" on page 27 and "Schedule 4. Softworks maintenance schedule." on page 20.

3.3.4 Replacement and enhancement planting:

 Remove and replace failing plants with a plant of the same species, to a minimum size of an open ground whip, 0.9-1.2m high, or 3L container grown 500mm high shrub for evergreen species. Ensure that the ground is well prepared and that any replacement planting is well watered. Include any plants that are destroyed by vandalism, theft or similar cause through no fault of the Landscape Management Contractor, up to and not exceeding 5% of the plant stock.

3.3.5 Pruning:

- Buffer planting should be allowed to attain a 'natural' thicket.
- Prune to prevent plants from overhanging highways or footpaths.

Willow Family (Salicaceae) Cornus sanguinea	Within the native shrub mix and on the edge of buffer areas, reduce to a 200mm stool above ground on a 2 yearly cycle, but retaining any young growth. (March)
Corylus avellena	Hazel should be coppiced on a 7-10 yearly cycle in the dormant season (October - March). Protect coppice stools from deer/ rabbit browsing by piling brash over them or with additional rabbit fencing. Monitor coppice periodically, noting any stools that fail to regrow and replant the following autumn.
Viburnum opulus Ilex aquifolium Rosa canina Lonicera periclymenum Frangula alnus	Prune damaged and diseased wood and limbs which are unsafe or are in danger of falling or breaking up during gales. Some deadwood can be left as habitat piles.

Schedule 2. Pruning schedule of native shrubs within a buffer mix

3.4 PROPOSED MIXED NATIVE HEDGEROWS

- 3.4.1 Native hedgerows are proposed along the eastern boundary to replace hedgerows to be removed and along the boundaries of open spaces. Tripple staggered row hedgerows are proposed to the boundaries of the attenuation area. They provide vital habitats and linear corridors for wildlife.
- 3.4.2 A proportion of the existing hedgerow along the western boundary to is to be removed (H007). This section of hedge is to be replanted behind hoarding and nurtured for the duration of the project and then continue to be managed once established. The new hedgerow will be in keeping with the original tree protection plan.

3.4.3 Management Objectives

- To set out the establishment and ongoing maintenance of native hedgerows to ensure healthy dense growth and a naturalistic appearance to define boundaries.
- To ensure that native hedgerows are maintained for the visual amenity and safety of users of the public open spaces.
- To promote the ecological value of proposed native hedgerows.

3.4.4 General Maintenance:

• Top up bark mulch levels to maintain a depth of 75mm using the same or similar product to that previously supplied for the first 3 years, to reduce competition from grass and weeds for moisture and nutrients. After establishment, native ground flora can be

Carry out all works in accordance with "Appendix 1. Guidance Note for Maintenance Practice" on page 27 and "Schedule 4. Softworks maintenance schedule." on page 20.

allowed to develop.

- Check rabbit guards/fencing and canes regularly. Remove guards after 2-3 years when the hedge is growing strongly.
- Firm in and straighten any loose plants when necessary.

3.4.5 Pruning Native Hedges:

- In the first spring after planting trim all lateral branches back by 50% (not Holly). Prune damaged, diseased or dead wood immediately after first leaf break.
- From the second year onwards, prune any diseased or rotten wood back to sound wood and remove all stems and limbs which are unsafe or are in danger of falling or breaking up during gales.
- Cut on a three year cycle (one side,top, other side) which will allow time for flowering and fruiting shrubs to develop throughout the length of the hedge and is the most beneficial for wildlife. Maintain to a height between 1.8-3m, depending on location. Long rural native hedges can be flailed once every two to three years if there is suitable access.
- Where the space and character allows, leave a 2m wide uncultivated zone from the middle of the hedge to aid in biodiversity.

3.4.6 Gapping up native hedges:

- Remove and replace failing plants with a plant of the same species and specification. Gap up areas of less dense growth with additional plants as required to achieve a continuous hedge alignment.
- Old, gappy hedges can also be rejuvenated by laying or coppicing (cutting stems down to 10-15cm above ground level).

Carry out all works in accordance with "Appendix 1. Guidance Note for Maintenance Practice" on page 27 and "Schedule 4. Softworks maintenance schedule." on page 20.

3.5 PROPOSED ORNAMENTAL/ FORMAL NATIVE HEDGEROWS

3.5.1 Ornamental hedges are proposed within the front and side gardens of plots to delineate the boundaries of plots facing onto public open space and busier roads, reflecting the semirural character of the site. As such they mostly fall outside of the remit of this management plan and this section is to be taken as guidance only. In a small number of locations ornamental hedging provides screening to screen walls and fences within public open space. Hedges are also proposed to create enclosure of the apartment blocks.

3.5.2 Management Objectives:

- To ensure the establishment and ongoing maintenance of hedges to provide a healthy, continuous and bushy line of shrubs which is good for wildlife.
- Maintain hedges to be attractive and neat to create safe and inviting spaces for residents.

3.5.3 General Maintenance:

- Watering: Water ornamental hedgerows regularly, saturating the full depth of topsoil. The programme of watering must be sensitive to the weather conditions to ensure the establishment and healthy growth plants. (Note 5)
- Weeding: Remove all weed growth by hand as necessary to ensure weed free and tidy planting areas. Visits should occur approximately every three months in the growing season, subject to weather conditions from April to October, with an extra visit outside of the growing season in December or January to inspect the condition of the beds. All weeds shall be removed from the site.

- Top up bark mulch levels to maintain a depth of 75mm using the same or similar product to that previously supplied.
- Fertiliser: Apply an annual single dose of evenly spread, 11:22:9 NPK slow release fertiliser at a rate of 60g per m2, from March -April.
- Gapping up and replacement of ornamental hedges: Remove failed plants and replace with a plant of the same species. Include any works necessary to enable planting to be properly carried out i.e. removal and disposal of dead material off site and for topping up/replacement of bark mulch.
- 3.5.4 Cutting / trimming of ornamental hedges:

Ligustrum vulgare	Cut in late spring to maintain a height of 1.2m to garden frontages and 1.8m where it is planted to screen boundary walls and fences.
Viburnum tinus 'Eve Price'	Trim back long growth after flowing (spring) to maintain a height of 1.2m to garden frontages and 1.8m where it is planted to screen boundary walls and fences. Viburnum has a soft, rounded habit which should be maintained through pruning.

Schedule 3. Pruning schedule of ornamental hedges

3.6 PROPOSED MIXED ORNAMENTAL PLANTING

3.6.1 Mixed ornamental planting beds are mostly proposed within private gardens and will be maintained by residents. As such this management operation is provided as a guide only to aid in understanding planting maintenance and is in no way prescriptive. In some areas of public open space ornamental planting of a naturalistic style are proposed against the sides of properties where native planting is precluded due to the risk to foundations. Additionally planting is proposed to the northern edge of the LEAP to create enclosure to the area with sensory value and suitable scale for children. Mixed planting creates colour, scent and form with habitats and food for wildlife.

3.6.2 Management Objectives:

- To ensure establishment and growth of new ornamental planting to enhance the visual quality of the development and provide tidy, welcoming spaces for users.
- Maintain planting in a healthy and attractive condition and enhance the value of planting for wildlife.

3.6.3 General Maintenance:

- **Watering:** Water ornamental hedgerows regularly, saturating the full depth of topsoil. The programme of watering must be sensitive to the weather conditions to ensure the establishment and healthy growth of plants. (Note 5)
- **Weeding:** Remove all weed growth by hand as necessary to ensure weed free and tidy planting areas. Visits should occur

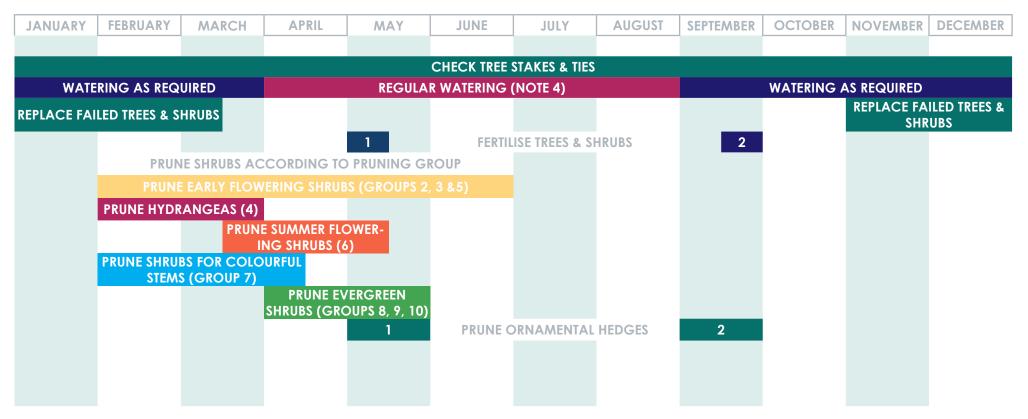
Carry out all works in accordance with "Appendix 1. Guidance Note for Maintenance Practice" on page 27 and "Schedule 4. Softworks maintenance schedule." on page 20.

approximately every three months during the growing season, subject to weather conditions from April to October, with an extra visit outside of the growing season in December or January to inspect the condition of the beds. All weeds shall be removed from the site.

- Top up bark mulch levels to maintain a depth of 75mm using the same or similar product to that previously supplied.
- Spot Herbiciding: Where required, persistent perennial weeds can be controlled using herbicide. For planting beds containing herbaceous plants and shrubs, apply a suitable folia-acting systemic translocated herbicide using a weed wiper device to avoid killing wanted plants. The use of herbicides should only be made following a risk assessment to consider potential effects on the environment and on human health, but also spray drift killing the wrong plants. (Note 4)
- Fertiliser: Apply an annual single dose of evenly spread, 11:22:9 NPK slow release fertiliser at a rate of 60g per m2, from March April.
- **Replace failing planting:** Remove and replace plants which are weak and failing or have died with stock of the size, species and quality originally specified. Ensure that the ground is well prepared and that any replacement planting is well watered. Include any plants that are destroyed by vandalism, theft or similar cause through no fault of the Landscape Management Contractor, up to and not exceeding 5% of the plant stock.
- **Pest Control:** Check unstable or failing shrubs and perennials for vine weevil larvae in the roots. Treat with a chemical or biological control and/or remove the plants, replacing with a species that is not susceptible (especially problematic for Heuchera, Taxus, Sedum & Primula).

3.6.4 Pruning:

- Prune shrubs according to their **pruning groups** and horticultural expertise. Pruning should aim to enhance the natural form of shrubs and maintain the health and visual amenity of planting beds.
- Cut back herbaceous perennials and deciduous grasses in late winter and clear away cut foliage.



Schedule 4. Softworks maintenance schedule.

Hill Residential Limited. Killingdown Farm, Croxley Green. July 2020

Carry out all works in accordance with "Appendix 1. Guidance Note for Maintenance Practice" on page 27 and "Appendix 2. Summary Maintenance Schedule"

3.7 AMENITY GRASS & BIODIVERSE AMENITY GRASS

3.7.1 Management Objectives:

- To ensure the satisfactory establishment of the grass sward; and
- To maintain healthy and suitable grass areas appropriate to function and use.

3.7.2 General Maintenance:

- **Mowing:** Amenity grass areas adjacent to paths and play features should be kept neat and low, while the mowing frequency and height of grass within less formal areas can be more relaxed.
- Cut the grass first in spring with a rotary mower to a height of 50mm.
- Regularly mow amenity grass through spring, summer and autumn using a cylinder mower, collecting the arisings each time, and removing off site.
- **Edging:** Once a year in spring, use a half-moon edging tool to define the edge between grass areas and planting beds, neatly cutting the edge of the planting bed and removing any grass which has grown into the bed.
- Strim or use edge clippers once per month during the growing season to keep the edges of paths and hard surfaces neat and free from grass.
- Watering: During the first year following initial seeding or following re-seeding operations, water amenity grass areas. (Note 5)

3.7.3 Re-mediation of failing turf:

- Scarify/ aerate poor quality turf and apply a slow release fertiliser at a rate of 70g/m² (unless within areas proposed as biodiverse amenity grass where no fertiliser should be applied).
- Where grass is damaged through high wear (especially during winter),fence off temporarily to allow the sward to recover.
- Where grass is unable to regrow due to compaction, consider implementing reinforcement mesh prior to over-seeding.

3.7.4 Replacement of failed turf:

- **Small areas:** Cut out sections of failed turf and supply and lay new turf of a suitable standard and lay flush with existing sward, filling any cracks and top dressing with a 70:30 ratio mix of sand and screened topsoil.
- **Re-seeding larger areas:** Cultivate the affected area until a fine tilth is achieved (removing stones greater than 20mm) and grade until level with adjoining areas. Apply a pre-seeding fertilizer at a rate of 70g/m² (unless within areas proposed as biodiverse amenity grass where no fertiliser should be applied) and seed to the mix and rate as per landscape area schedule and specification (1964-GUA-DR-L-010), raking until the seed is a few millimetres below the surface. Water thoroughly and maintain the soil in a moist condition, removing stones, weeding and mowing until the grass is established.

3.8 PROPOSED WILDFLOWER GRASSLANDS

3.8.1 Areas of proposed wildflower meadows are proposed associated within the attenuation area and will provide habitats for a wide variety of species and will be managed for biodiversity. These areas will be seeded with mixes suitable for occasional flooding and damp ground. Areas of wildflower suitable for shaded locations are also proposed under trees within the orchards with spring bulbs and alongside native hedgerows.

3.8.2 Management Objectives:

- To ensure the satisfactory establishment of the grass sward and the visual amenity of the public areas.
- To ensure the ecological value of wildflower areas.

3.8.3 First year maintenance (Mix 1,2,4)

• Mow regularly through the growing season to a height of 40-60mm to control weed growth and promote diversity of the sward. Collect and remove arisings from site.

3.8.4 First year maintenance (Mix 3)

 Cut back annual weed growth to encourage the development of a good perennial ground cover. Establishment on sites prone to flooding may be patchy and may take several years to fully colonise.

3.8.5 First year maintenance (Orchard Wildflower Mix with Native Bulbs)

 Cut after bulbs have flowered and foliage has died back (late June) to a height of 40-60mm, removing all arisings from site. Maintain regular mowing to maintain a short 40-75mm sward through autumn. Carry out all works in accordance with "Appendix 1. Guidance Note for Maintenance Practice" on page 27 and "Schedule 7. Wildflower areas maintenance schedule" on page 23. The seed supplier Emorsgate Seeds can provide additional management advise: https://wildseed.co.uk (01553) 829028.

3.8.6 General maintenance (Year 2 onwards of Mix 1,2,4 and orchard wildflower mix with native bulbs)

- Cut a summer hay-crop in mid-July to early August to a height of 50-75mm. Rake up all arisings after 1-7 days (allowing time for seeds to disperse) and remove off site.
- Cut each wildflower area in blocks on a cycle, a couple of weeks apart to allow wildlife refuge and the development of a greater diversity of wildflowers (as each sets seed at different times).
- Be aware of any **protected species** (such as reptiles and amphibians) that may be present and take advise from an Ecologist if required.
- Where bulbs are proposed within wildflower areas within the orchards an additional cut should be taken in late autumn to maintain a short sward for early spring.
- **Weeding:** Remove by hand any vigorous undesirable plants such as nettles, thistle and docks.
- A 2-3m wide strip of grass alongside the existing and proposed native hedgerows within the attenuation area should be treated as tussock grass (see below).

3.8.7 Maintenance and cutting of Tussock grassland:

 To control scrub and bramble development cut tussock grassland areas every 2 years between October and February on a rotational basis so that no more than half the area is cut in any one year leaving part as an undisturbed refuge for wildlife. Unwanted perennial weeds (docks, thistles) may need control by occasional spot treatment with a herbicide. (Note 5)

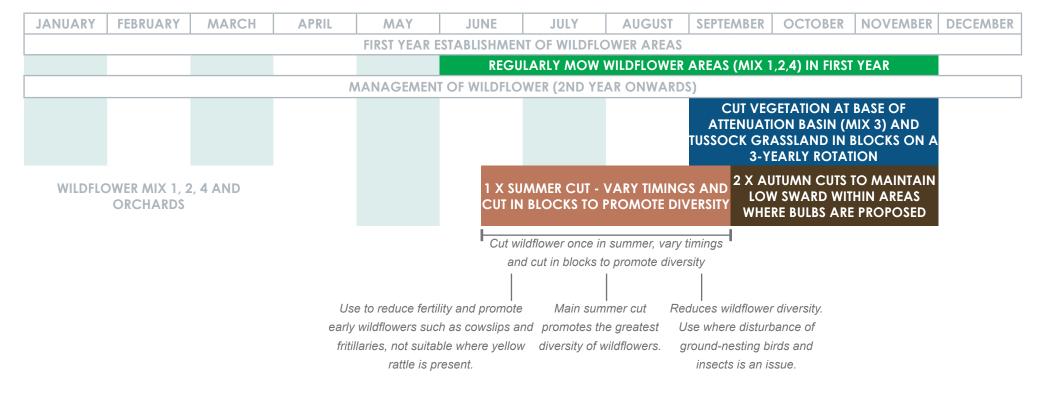
Hill Residential Limited. Killingdown Farm, Croxley Green. July 2020

3.8.8 General maintenance (Year 2 onward of Mix 3):

 Cut down to the ground 1/3 of the vegetation within the attenuation area each year on a 3 yearly rotation from September - November. Machines and heavy equipment should be used with care on wet sites to avoid damage to soil and vegetation.

3.8.9 Enhancement of species-poor areas:

 Closely strim or mow the existing sward and remove all cuttings in October. Harrow or scarify to disturb the ground and overseed with a wildflower only seed mix (suitable mixes: https:// wildseed.co.uk/mixtures/category/100-wild-flower-mixtures).
Maintain the sward to a height of 60mm for the following season.



Schedule 7. Wildflower areas maintenance schedule

3.9 HARD LANDSCAPE AREAS AND FURNITURE

3.9.1 Management Objectives:

- To ensure that hard landscape surfaces are safe and comfortable to use and are clean from litter and other debris.
- Maintain the furniture in public spaces to ensure the longterm amenity value of elements.

3.9.2 General maintenance of hard landscape areas:

- Ensure all paved surfaces are clean, tidy and free from dust, litter and debris through regular sweeping (removing all arisings off site). Increase maintenance in autumn when leaves are falling.
- Regularly inspect all hard landscape surfaces and edgings to ensure they are sound and free from: mechanical damage, vandalism, settlement, frost heave, staining, litter and debris or any other defect.
- Failing areas which cause a health and safety concern **are to be clearly fenced-off from the public.**
- Document all defects and **repair as new as soon as feasibly possible in** agreement with the Adopting Organisation.
- A route regularly used by horses is proposed as self-binding gravel. This path should be inspected regularly and filled/ compacted as required to maintain an even surface without trip hazards suitable all users of the path.

3.9.3 General maintenance of furniture:

- Inspect all street furniture (including benches, litter bins & signs) twice a year to ensure that it remains soundly and safely installed. Re-install any loose furniture.
- Clean furniture of any debris and algae.
- Check timber furniture for wear to any preservative treatment/ finishes.
- Apply a proprietary timber preservative to damaged timber furniture to match the original treatment type and colour.
- Check metal furniture elements for any painted surface has not become worn or eroded. Rectify any damaged areas with an appropriate paint to match the original colour/finish.
- Check furniture for graffiti twice a year. The contractor should keep accurate records of any graffiti and should make every endeavour to remove / remediate furniture that is subject to graffiti.
- Where furniture can not be fixed it should be replaced with an appropriate alternative.

3.10 PLAY FEATURES

3.10.1 A junior and toddler playspace is situated within the central open space, including areas of formal play equipment, furniture and signage. Further play opportunities are provided with raised mounds.

3.10.2 Management Objectives:

- To set out a schedule for regular monitoring of play equipment to ensure the soundness and safety of all playable features so as to minimise the risk of injury to users of all ages.
- To ensure that play features are decommissioned if unsafe and repaired as soon as possible to a sound and satisfactory

3.10.3 Schedule of Inspections:

- **Routine inspections** should be carried out by a suitably experienced representative of either the Adopting Organisation or Landscape Management Contractor and recorded on a site checklist. The programme of inspections should be designed to respond to the usage and specific risks of the site.
- Annual inspections shall be completed by a specialist contractor not employed by the Adopting Organisation, such as those approved by the Register of Play Inspectors (www. playinspectors.com). Following the inspection, the specialist contractor shall prepare and issue an independent written report for review. Any issues identified by the annual inspection should be rectified as soon as possible. Where required play features and associated safety surfacing should be replaced.

3.10.4 General maintenance:

- · Clean play features, removing dirt and any graffiti at each visit.
- · Check safety surfaces for any sharp objects, litter and debris

(removing from site) as well as general wear, tear or other defects.

- Check that posts are upright and firm, that footings are intact and fixings are secure and in good repair. Ensure that wood work is complete and that there is no sign of damage or any other defect.Inspect play features for quality control and to identify minor wear and tear.
- Inspect the general surroundings of the play areas landform, highlighting issues arising from vandalism, breakages and cleanliness.

3.10.5 Defects and repairs:

- Record all defects and make arrangements for repair within seven days with the item supplier or other suitable and approved contractor.
- Make good wood work with a matching treatment and colour applied strictly in accordance with the manufacturer's instructions, product COSHH sheet and COSHH Regulations. All repairs must be carried out strictly in accordance with the supplier's instructions.
- Erect temporary fencing and warning signage to secure any play features/surfacing with defects which make the area unsafe to use. Remove as soon as the item is made good.

3.10.6 Contact Information:

• Signage on site should be kept up-to-date with contact details for reporting emergencies and defects. The Adopting Organisation shall ensure that a representative is available for emergency call out 7 days per week to deal with dangerous items quickly.

INTRODUCTION IMPLEMENTATION PROGRAMME MAINTENANCE OPERATIONS APPENDICES

4. APPENDICES

APPENDIX 1. GUIDANCE NOTE FOR MAINTENANCE PRACTICE

NOTE 1	Tree Work Consents	Any works to a TPO tree (such as crown raising, crown reduction, substantial pruning, removal of limbs, pollarding or felling) should be documented and a formal application made to the LPA for approval (with the exception of the removal of dead wood) in advance of the works being undertaken.
NOTE 2	UK/EU Wildlife legislation	All works should be completed in accordance with relevant EU and UK wildlife legislation. Where possible this should be outside of the bird nesting season (i.e. between 1st September and end of February). During the nesting season a suitably qualified ecologist will be required to check for any active nests.
NOTE 3	Good Practice of Arboriculutral Contractor	All tree works shall be carried out by a suitably qualified tree surgeon, a member of the Arboricultrual Association, in accordance with BS3998: 2010 'Tree Work - Recommendations'. All brushwood and logs that result from surgery and felling of trees on site shall be removed off site, unless needed to enlarge or renew hibernacula or eco piles. Brushwood may be chipped on site, but all wood chippings resulting from these operations shall be raked up, bagged and removed. Where surgery works affect a highway, the Arboricultural Contractor shall ensure the relevant permissions and road control permits are obtained, and all necessary health and safety parameters are met.
NOTE 4	Use of Herbicides and Pesticides	The purchase, transport and storage of herbicides are regulated by Part III of the Food and Environment Protection Act 1985, Control of Pesticides (Amendment) Regulations 1997; the Health and Safety at Work Act 1974; the COSHH Regulations, the product COSHH sheet and EC Directive 91/414/EEC (the "Authorization Directive") and the Plant Protection Products Regulations 1995 as amended by the Plant Protection Products (Basic Conditions) Regulations 1997. All herbicides must have an appropriate full or "off-label" approval for use in a relevant situation. Refer to the Pesticide Safety Directive, for which the website is given here for your assistance: www.pesticides.gov.uk. All pesticides shall be applied in suitable calm weather conditions; allow for repeat spraying as required to achieve a complete kill. Apply herbicide as required and at intervals to ensure no regeneration of weed. Extreme care must be taken to avoid damage to surrounding plants and grass, and to avoid spray drift. Any damage resulting from incorrect usage, spillage, and spray drift, to be rectified at the Landscape Management Contractor's expense.
NOTE 5	Watering	For the first year after planting proposed trees, mixed ornamental planting and amenity grass will require regular watering to ensure establishment. When watering, the top layer of soil should be fully saturated. To improve efficiency and reduce evaporation during hot periods. Climatic conditions, such as hot, dry weather, wind and lack of rainfall can all impact the water available to plants in the soil and thus the frequency of watering required. The Landscape Management Contractor shall be entirely responsible for varying the frequency of visits according to climatic conditions and for contacting the Adopting Organisation to agree the timing of any additional watering visits if required. Where restrictions are placed on the use of water, sources and costs of obtaining second class water must also be agreed. The Landscape Management Contractor shall be responsible for any failures of plants and trees or excessive die back from drought stress during the management contract. Following the first year after planting, the frequency of watering can be reduced and focused on ornamental planting and trees during periods of dry weather only.

APPENDIX 2. SUMMARY MAINTENANCE SCHEDULE

MAINTENANCE OPERATION	NUMBER OF VISITS (INDICATIVE TIMES SHOWN ONLY AS DEPENDANT ON SITE CONDITIONS AND WEATHER)					
	NOV-FEB	MAR-MAY	JUN-AUG	SEPT-OCT	VISITS PER YEAR	
HARD WORKS & FURNITURE GENERAL MAINTENANCE						
Collection and removal of litter & leaves from all hard and soft areas to include general tidying and sweeping of paving.	At each site visit - addi	ional visits may be requi	red in autumn to collec	ct leaf litter.	As required	
Inspection of hard surfaces for defects. Document any defects and carry out any remedial works as necessary.		Once annually or as required				
Inspect furniture for safety, security & graffiti. Clean furniture of algae/debris and check fixings. Repair/ replace as necessary & refinish wood & metalwork as required.	Twice annually or as required				2	
PLAY FEATURES						
Clean play area, features & safety surfacing.		At each site	e visit		As required	
Routine inspection of play area, equipment and safety surfacing. Findings to be logged and defects to be rectifyed within 7 days.	As required - The programme of inspections should be designed to respond to the usage and specific risks of the site.			To be agreed		
Annual Inspection by a registered play inspector of play area, equipment & safety surfacing.	Once Annually	Once Annually				

MAINTENANCE OPERATION	NUMBER OF VISITS (INDICATIVE TIMES SHOWN ONLY AS DEPENDANT ON SITE CONDITIONS AND WEATHER)					TOTAL NUMBER OF	
MAINTENANCE OF ERAHON	NOV-FEB	MAR	-MAY	JUN-AUG	SEPT-OCT	VISITS PER YEAR	
SOFTWORKS							
Visual inspection of mature trees Carry out further assessment if defects recorded (by suitably qualified professional).		1	At each site	e visit	1		
Significant tree works to mature trees and hedgerows. Works to be undertaken by a suitably qualified professional.	As required			g bird nesting th and Safely risk.	As required	As required	
Cutting of native hedgerows	Nov-Dec					1	
Cutting of ornamental hedgerows	Refer to Schedule 3 Ornamental Hedges Pruning Schedule & Schedule 4 Softworks Maintenance schedule.				As required		
Pruning trees and shrubs	Refer to Schedule 4 Softworks Maintenance schedule & Schedule 5 Shrub Pruning Groups.					As required	
Re-firm and stabilise shrubs and trees after strong winds and frost.	As required					As required	
Check, adjust, replace, remove tree ties and stakes	At each site visit						
Fertilising trees and shrubs, using a slow release granular product.	Early May Late Sept		Late Sept	2			
Replacement of failing or damaged trees and shrubs.	As required					As required	
Cut back herbaceous perennials and perennial grasses	Late winter/ early spring or as plants show signs of disease. Cut back geraniums and deadhead to encourge a second flush of flowers.			2			

MAINTENANCE OPERATION	NUMBER OF VISITS (INDICATIVE TIMES SHOWN ONLY AS DEPENDANT ON SITE CONDITIONS AND WEATHER)					
	NOV-FEB	MAR-MAY JUN-AUG		SEPT-OCT	VISITS PER YEAR	
GENERAL MAINTENANCE OF SOFTWORKS AREAS						
Watering (refer to Schedule 4 Softworks Maintenance Schedule and Note 5).	As required to ensure establishment, adjust frequency to climatic conditions.	Watering should be significate and the minimum number per fortnight. The freq increased further during the second	ummer months with of visits being once uency should be	As required to ensure establishment, adjust frequency to climatic conditions.	As required	
Hand weeding, to ensure tidy beds and control competition with new shrub and tree planting.	As required	At each site visit				
Spot herbicide pernicious weeds (Refer to Note 4). Only use where absolutely required and hand weeding/mulching will not sufficiently control weed growth/competition with new planting.		Apply to vigorous new weed growth in Spring/ Early Summer.			As required	
Top up mulch to ensure 75mm depth coverage of planting areas and 500mm radius around trees planted in grass.				Annually	1	
MAINTENANCE OF GRASS AREAS						
Cutting amenity grass areas (POS) - Frequency to be adjusted to match climatic conditions. Collect and remove arisings at each cut.	Only if required	Once per month once cutting has commenced in late March/ early April	Once per month	Once per month	As required	
Edging lawns and amenity grass areas		At each site visit				
Cutting Wildflower areas	Refer to wildflower Maintenance Schedule 7 for timing of cutting and frequency of visits. Biodiversity of the sward should be monitored and cutting regime amended to improve the ecological and amenity value of wildflower areas.					
Replacement of amenity grass and Wildflower areas				As required		

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