

Date: July 2015

Land West of Chesterton,
Oxfordshire

Landscape Management Plan

Prepared by
CSa Environmental Planning

On behalf of
Taylor Wimpey UK Ltd

Report No: CSa/2325/06

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Appendix A

Detailed Planting Proposals *CSa/2325/112-113*

Appendix B

Management Areas *CSa/2325/114*

Appendix C

Bird and Bat Box Provision *CSa/2325/BN01*

1.0 Introduction

- 1.1 The following Landscape Management Plan has been drawn up by CSa Environmental Planning on behalf of Taylor Wimpey UK Ltd. It sets out the necessary prescriptions for the management of the new planting in the residential and public open space areas of the site.
- 1.2 Maintenance prescriptions have been formulated to maximise the landscape amenity of the site, maintain healthy plant growth, keep planting beds free from weeds / litter and ensure plant stock remains free from disease. This plan deals with the maintenance of the following areas:
- Maintenance of Existing Trees;
 - Maintenance of Proposed Tree Planting;
 - Maintenance of Hedge Planting;
 - Maintenance of Proposed Shrub Planting;
 - Maintenance of Proposed Amenity Grass Areas;
 - Maintenance of Thicket / Woodland Planting;
 - Maintenance of Long Grass and Wildflower Planting; and
 - Maintenance of Hard Surfaces, Street Furniture & LAP.
- 1.3 The plan covers the first 5 years of maintenance. After which, the plan will be reviewed by the District Council or their appointed management company to identify any issues with the existing plan and to set out prescriptions for long-term maintenance of the site. Input from an experienced ecologist will be sought to ensure that the management objectives are suitable for the ongoing conservation of wildlife on the site- particularly great crested newts *Triturus cristatus* and slow-worm *Anguis fragilis* and compatible with the Mitigation Strategy produced for these species (CSa/2325/07).
- 1.4 This plan should be read in conjunction with the Soft Landscaping Proposals (CSa/2325/112-113) and the Bird and Bat Box Provision Note (CSa, update 11 March 2016) which is provided in Appendix A and C, respectively.
- 1.5 Following initial development of the site, the first 12 months planting maintenance will be the responsibility of the landscape sub-contractor as appointed by the developer. Following this period, a Management Company will be set up to manage the communal and open spaces at this site.
- 1.6 Planting areas or ecological features (e.g. bird boxes) that are conveyed to the individual dwellings will remain the responsibility of the occupier.

2.0 Site Description

- 2.1 The site comprises two fields, one arable and one pastoral, located at the south western edge of the village of Chesterton. It is bound to the north by allotments; to the east by properties as The Woodlands and Fortescue Drive; to the south by a mature tree line and arable fields and to the west by an unnamed road and Bicester Country Club.
- 2.2 The development site is approximately 2.76ha consisting of 45 residential units and associated Public Open Space.
- 2.3 A tree survey has been undertaken by Ian Keen Ltd (ref: 8364/01) and should be read in conjunction with this report.

3.0 Implementation of the Works

- 3.1 All works should be installed in accordance with the details and specification set out in this report and those contained on the drawings contained in Appendix A.
- 3.2 All planting should take place in the first available planting season following construction of the open space areas and to meet the criteria of the general planting specification set out in on the drawings contained in Appendix A.
- 3.3 The LAP play equipment should be installed as per the layout contained on the drawings at Appendix A, with all equipment and the installation according with the requirements of EN1176.

4.0 General Maintenance Items

- 4.1 Maintenance of the landscape areas shall be undertaken by a competent Landscape Contractor, preferably registered with the British Association of Landscape Industries (BALI).
- 4.2 Maintenance visits shall be undertaken at monthly intervals (min 12 visits per year). At each visit the following operations shall be undertaken:
- (i) Regularly litter pick entire site to ensure that all planting and amenity areas are kept free from litter;
 - (ii) Rake-up any leaf litter and remove from site;
 - (iii) Ensure that all adjacent areas affected by maintenance operations are protected using boards or tarpaulins. Do not place excavated or imported materials directly onto grass/hard surfaces;
 - (iv) Undertake weeding of planted areas.
 - (v) Undertake watering as required to ensure healthy growth / establishment of plant stock especially during the summer months (May to Aug) or during periods of prolonged drought where more frequent visits may be required.
 - (vi) Sweep all hard surfaces to ensure they are kept free from litter and leaves;
 - (vi) Undertake the landscape maintenance outlined in the following sections.
- 4.3 All soft landscape areas to be maintained to BS7370-4:1993.
- 4.4 The Contractor shall physically maintain the whole of the site in accordance with the schedules and specification included within this document. The landscape maintenance is to be carried out to a high standard at all times.
- 4.5 A record or log of all maintenance visits should be undertaken by the appointed Contractor and these should be collated on a six monthly basis and submitted to the management company for review.
- 4.6 The Contractor shall ensure that any chemical application is undertaken by trained personal / operatives who have the appropriate NPTC certificates and in accordance with the manufacturer's recommendations. The 'Code of Practice for the Safe Use of Pesticides for Non-Agricultural Purposes' will be observed where applicable. The use of any chemicals shall be noted on the record sheets as outlined above.

- 4.7 The Contractor should ensure that the site is left in a tidy and safe state following the undertaking of works outlined in the enclosed schedules and this shall be at the end of the day of each visit. All arisings should be removed from site in accordance with the schedules.
- 4.8 The Contractor shall programme and vary their agreed time of visits to coincide with appropriate weather conditions for carry out of operations, with particular regard for the use of chemicals and the mowing of grass. The mowing of grass during excessively wet weather or following periods of extended rain is strictly prohibited.
- 4.9 The Contractor should notify the management company to any significant pest or disease problem affecting the planted stock and shall provide a suitable strategy for treatment to be agreed with the client.
- 4.10 The Contractor shall advise the management company of all trees and other plants found to be dead, dying, vandalised or suffering significantly from the current growing conditions. All failed / defective plants identified within the first 12 months of installation should be replaced by the contractor at the soonest available planting season to ensure a continued coverage of growth. Replacement plants should be of the same species and specification of the failed specimens.
- 4.11 Chipping and shredding is not permitted on site without prior consent from the management company.
- 4.12 Should mammalian pests become a significant problem on site, then proposals for their control / eradication should be submitted to the management company for approval.
- 4.13 Ensure that a suitable water supply is available to carry-out the operations detailed in this document. In the event of water restrictions (e.g. drought), the contractor will be responsible for submitting proposals to the management company for an alternative source of water e.g. use of a trailer mounted bowser.

5.0 Maintenance of Existing Trees and Hedgerow

Trees

Objectives

- 5.1 Management of existing trees for safety, and to maintain healthy growth, attractive form and promote longevity.
- 5.2 Management of hedgerow to the perimeter of the site
NB: Should be read in conjunction with the Arboricultural Assessment report by Ian Keen Ltd. ref: 8364/01.

Prescriptions

- 5.3 Monitor existing trees for any sign of defects or poor health twice yearly or after severe weather i.e. winds in excess of 50mph or snowfall >10cm. Report any signs of ill health or damage and take remedial action when instructed.
- 5.4 If trees show signs of poor growth in a heavily trodden area, with no observable pests or diseases, feed and aerate the root area or in severe cases, undertake specialist decompaction e.g. 'Terravent'.
- 5.5 Similarly, if trees appear to be suffering any signs of nutrient deficiency a general fertiliser should be applied as appropriate and in accordance with manufacturer's instructions, and hoed into bare soil beneath canopy line.
- 5.6 Routine annual pruning of mature trees should be carried out, in order to promote well balanced, natural canopy and prevent overshadowing of windows or obstruction of footpaths.
- 5.7 Tree work should be carried out in accordance with BS 3998 and Health and Safety Executive (HSE) 'Forestry and arboriculture safety leaflets'. Branches should be cut in accordance with the Arboricultural Association Leaflet 'Mature tree management'. In each case cut back to live wood using appropriate tools and do not prune during the late winter / early spring period.
- 5.8 Clean out and remove any dead, dying or diseased wood, broken branches or growths, fungal bodies and fruiting bodies. Remove any rubbish or objects / structures which have become attached or accumulated within the canopy or on the trunk of the tree.
- 5.9 All tree work should be carried out by a suitably qualified professional tree surgeon, preferably a registered member of the Arboricultural Association.

Hedgerows

Objectives

- 5.10 To manage existing overgrown hedgerow to provide a dense boundary to the development and provide wildlife habitats.

Prescriptions

- 5.11 The hedgerow will be managed more intensively in year 1 to encourage the development of a more bushy structure. The tall hedgerow will be cut back to approximately 5m and lateral growth will be reduced to either side by approximately 1m. Works to the hedgerow will be undertaken in the first winter following the start of works on site, ideally in January / February. Care will be taken during cutting operations to avoid damage to existing hedgerow trees. Dead wood will be removed from the canopy of the hedgerow to allow an accurate assessment of the hedgerow's condition following cutting operations.
- 5.12 Following these initial works the condition of the hedgerow will be assessed. Infill planting will be undertaken within gaps in the existing hedge line, incorporating native shrub species as transplants together with larger standard trees to provide vegetative cover in the short term. (As shown on the plan at Appendix A)
- 5.13 From Year 2 onwards the hedgerow will be managed with an annual cut to 5.5m in January / February. Lateral growth will be reduced on the outside edge of the hedgerow to promote new growth and dense structure.
- 5.14 New planting will be monitored regularly. Weed growth at the base of new planting will be controlled by topping up mulch levels and where necessary hand weeding or the application of a suitable translocated herbicide e.g. Glyphosate.

6.0 Maintenance of New Tree Planting

Objectives

- 6.1 To ensure new tree planting is suitably cared for to enable its successful establishment, and to promote healthy growth and attractive form.

Prescriptions

- 6.2 Watering programme should be monitored to ensure that at times of water shortage (e.g. drought) sufficient water is applied to meet the conditions.
- 6.3 Apply annually a single dose of evenly spread, 11:22:9 NPK, slow release fertiliser to the base of the tree at a rate of 50g per tree, from March – April; replace mulch layer.
- 6.4 Inspect stakes and ties to trees, twice yearly or after severe weather. Test for soundness in early and late winter, and replace tight or ineffective ties. Ties should be replaced in slightly different position. Remove stakes and ties as soon as trees are self-supporting to benefit tree establishment. Ensure that stake(s) are wholly removed from the ground and that the remaining hole is filled with clean topsoil.
- 6.5 Re-firm trees in ground after strong winds, frost heave or other disturbances.
- 6.6 Monitor and replace failed planting with new plants between October and March. Ensure planting is conducted into well-prepared ground.
- 6.7 Trees should be routinely inspected for pests and diseases.
- 6.8 Crown prune young trees by removing dead branches and reducing selected side branches, ensuring development of a single strong leader. Pruning should be carried out in accordance with BS 7370-4.
- 6.9 Maintain any mulch layer at the base of each tree by annual topping-up to a depth of 75mm to a diameter of 1.2m around the trunk.

7.0 Maintenance of New Woodland / Thicket Planting

Objectives

- 7.1 To ensure native shrub and tree planting areas establish well to provide strong, dense structural landscape features within the public open space areas and areas of wildlife habitat.

Prescriptions

- 7.2 During and following the establishment of the planting, ensure that sufficient water is applied to maintain healthy growth as required. Ensure that full depth of topsoil is saturated. Watering programme should be monitored to ensure that at times of water shortage (e.g. drought) sufficient water is applied to meet the conditions.
- 7.3 Inspect shrub shelters monthly to ensure they are secure in position and re-firm / replace as required.
- 7.4 Prune and re-shape native transplants at the appropriate time according to individual requirements to promote good form and encourage strong growth.
- 7.5 Keep all beds clear of weeds by cultivating and use of approved herbicides. Fork-over/hoe beds as necessary to keep soil loose, disposing of arisings off-site. Every three months apply a spot herbicide treatment to the base of each transplant (300m radius) to prevent weed growth competing with the plants.
- 7.6 Regularly monitor any mulch levels and re-mulch in September to original depth, or when required.
- 7.7 Regularly check for plantings which have been loosened by wind or frost and re-firm any loose plants back into the ground.
- 7.8 Monitor and replace failed planting with new equivalent plants between October and March.
- 7.9 All plants should be maintained in a disease and pest free state through the application of a suitable proprietary herbicide/pesticide.
- 7.10 Ongoing management will be low intervention. Scrub will be lightly pruned to maintain extent and encourage bushiness. Woodland areas will be inspected by a qualified arboriculturist in year 5 of this plan to determine whether any thinning or pruning works will be required in the following years. These prescriptions will be incorporated into the Management Plan following its review.

8.0 Maintenance of New Native and Ornamental Hedge Planting

Objectives

- 8.1 To ensure newly planted hedges are suitably cared for to enable successful establishment into a dense bushy hedge that can be suitably maintained for ornamental and amenity value.

Prescriptions

- 8.2 During and following the establishment of the planting, ensure that sufficient water is applied to maintain healthy growth as required. Ensure that full depth of topsoil is saturated. Watering programme should be monitored to ensure that at times of water shortage (e.g. drought), sufficient water is applied to meet the conditions.
- 8.3 Prune and re-shape hedge species at the appropriate time according to individual requirements to promote good growth and compact form, removing any dead or dying wood. For native hedgerows cut alternate sides each year maintaining a height of 1.2 meters.
- 8.4 For transplants (hawthorn), on planting, cut back growth by 30-50% to promote bushy growth. In year 2, cut all new growth back by a further 50% to again promote bushy growth.
- 8.5 Keep all hedge planting trenches clear of weeds by cultivating and use of approved herbicides. Fork-over/hoe beds as necessary to keep soil loose, disposing of arisings off-site.
- 8.6 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.
- 8.7 Top-up the mulch surface (where applicable) with chipped tree bark following planting, to a depth of 50mm. Regularly monitor mulch levels and re-mulch in spring or autumn to original depth, or when required. Re-firm and re-peg mulch mats as required.
- 8.8 Regularly check for transplants which have been loosened by wind or frost and re-firm any loose plants back into the ground.
- 8.9 Monitor and replace failed planting with new equivalent plants between October and March.
- 8.10 All plants should be maintained in a disease and pest free state through the application of a suitable proprietary herbicide/pesticide.

9.0 Maintenance of New Shrub Planting

Objectives

- 9.1 To ensure planting within public open space areas is suitably cared for to enable its successful establishment, to maintain growth and shape of plants and prevent planting beds becoming overgrown and untidy. To keep all planting areas weed and litter free.

Prescriptions

- 9.2 During and following the establishment of the planting ensure that sufficient water is applied to maintain healthy growth as required. Ensure that full depth of topsoil is saturated. Watering programme should be monitored to ensure that at times of water shortage (e.g. drought) sufficient water is applied to meet the conditions.
- 9.3 Prune and re-shape shrub species at the appropriate time according to individual requirements. Remove dead or dying wood, in order to promote healthy growth and attractive form. Shrubs should be prevented from becoming overgrown, with particular attention to plants adjacent to windows, footpaths and roads to prevent obstruction. Avoid hard pruning to bare wood.
- 9.4 Keep all beds clear of weeds by cultivating and use of approved herbicides. Shallow-hoe beds as necessary to keep soil loose, disposing of arisings off-site. Remove litter as identified.
- 9.5 Apply an annual single dose of evenly spread, 11:22:9 NPK slow release fertiliser at a rate of 60g per m², in March - April.
- 9.6 Mulch the surface of the planting beds with chipped tree bark following planting, to a depth of 50mm. Regularly monitor mulch levels and re-mulch in spring or autumn to original depth, or when required.
- 9.7 Regularly check for plantings which have been loosened by wind or frost and re-firm any loose plants back into the ground.
- 9.8 Regularly check beds on routine visits to assess whether thinning is required. When plantings are starting to overlap, it may be necessary to remove some individual plants to retain the character of the bed. Thinning should take place as required in a logical process over several stages.
- 9.9 Monitor and replace failed planting with new equivalent plants between October and March. All plants should be maintained in a disease and pest free state through the application of a suitable proprietary herbicide/pesticide.
- 9.10 Dead head flowering shrubs following the flowering period to promote further flowering. NB: Remove arisings from site.

- 9.11 Annually cut back herbaceous and perennial shrubs as required in the autumn to promote healthy growth and seasonal flowering.
- 9.12 Edge up borders annually to maintain neat planting beds.

10.0 Maintenance of Amenity Grass Areas

Objectives

- 10.1 Ensure grass areas are suitably managed in order to maintain an attractive lawn, and facilitate passive recreation in amenity grass areas for the benefit of the local and wider community.
- 10.2 To provide a contrasting short grassland habitat to long grassland and wildflower meadows. This will encourage a different range of bird and invertebrate species, within the north of the development in the public open space.

Prescriptions

- 10.3 Establish and maintain all amenity grassland areas to a height of 25mm - 35mm by cutting as necessary through the growing season. Maximum sward height 75mm. In practice, cuts every 2 weeks are likely to be required. Cuttings are to be removed from site.
- 10.4 Allow turf grass to establish to a minimum height of 35mm before first cut. Then as necessary through the growing season and as required during the winter months (to maintain to 30mm). Arisings to be removed from site.
- 10.5 Where grass areas have become worn or have failed to establish, areas will be over-seeded with amenity grass seed. All grassed areas will receive an application of a proprietary granular slow-release fertilizer twice yearly in the spring and the autumn. NB: Area to be fenced off during establishment.
- 10.6 Remove all litter including fallen leaves from grass areas prior to mowing. Do not use mowers/strimmers within 100mm of tree stems, use nylon filament rotary cutters or other hand held machinery to avoid damage to bark. Strim around any obstructions e.g. street furniture.
- 10.7 All grassed areas should receive an application of a proprietary granular slow-release fertilizer twice yearly in the spring and the autumn (refer to schedules).
- 10.8 A selective herbicide should be used in order to suppress any perennial weeds.
- 10.9 Edges adjacent to footpaths should be reformed and left neat after each maintenance visit.
- 10.10 All grassed areas should be scarified annually in the autumn to remove thatch conditions and the build-up of dead grass. Following annual scarification, grassed areas should be thoroughly spiked to aerate soil and improve drainage.
- 10.11 Bare areas and areas of dead grass which become apparent should be rectified by over-seeding and/or turf re-installation at the soonest available planting season.

11.0 Maintenance of Wildflower / Long Grass Areas

Objectives

- 11.1 To provide new areas of habitat adjacent to established tree lines and hedgerows and to provide seasonal colour and interest.
- 11.2 To provide wildlife habitats around ecological features, including log piles and hibernacula within wildflower and long grass areas.

Prescriptions

- 11.3 In locations adjacent to established tree lines and hedgerows, a suitable wildflower grass mix will be sown which is tolerant of shady conditions. This will provide a graded ecotone of habitats at the edge of the Site and provide attractive areas of wildflowers.
- 11.4 A 1 metre offset from the ecological features, such as the hibernacula and log piles in the wildflower areas is not to be cut / mowed for the first year.
- 11.5 In the first year, wildflower areas should be managed more intensively to prevent the intrusion of invasive ground flora and allow a diverse flora to develop. Cutting should take place every 6 weeks down to 100mm throughout the first growing season, in order to retain reptile and other wildlife habitats in the long grass areas.
- 11.6 Once established, long grassland and meadow areas should not be cut (or grazed) during the spring or summer to allow plant species to flower and set seed, as well as to provide cover for wildlife.
- 11.7 From year 2 onwards, they be maintained with an annual cut after seed drop in September. The sward should be cut to no lower than 100mm to avoid harm to reptiles and amphibians using the habitat. All arisings should be allowed to lay in-situ for 24 hours before being removed from site in order to allow any wildlife to disperse and reduce nutrient build-up.
- 11.8 A further cut of wildflower meadow areas will be taken in spring (March/April) as conditions allow, and where necessary to remove any excess winter growth.
- 11.9 Wildflower meadow areas should be monitored to assess the growth of any invasive species and should be hand-weeded or spot swiped for any perennial weeds such as docks, nettles and ragwort.
- 11.10 Routes through the long grass areas, will be mown and maintained throughout the growing season to 25-35mm to indicate the pedestrian recreation path through. Establish In practice, cuts every 2 weeks are likely to be required. Cuttings are to be removed from site.

12.0 Maintenance of Hard Surfaces, Street Furniture and LAP

Objectives

- 12.1 To ensure that hard surfaces are maintained in a safe, debris-free state to facilitate all-year-round use of the open spaces areas. Ensure that the street furniture is maintained and useable and that the LAP is maintained in a safe condition.

Prescriptions

General Paved Surfaces

- 12.2 As required, ensure all hard surfaces are maintained free from debris, litter and fallen leaves through regular sweeping. Remove any arisings from site.
- 12.3 Undertake regular inspections to ensure that all hard surfaces are sound and free from cracks or trip hazards. Patchy, worn areas or where the hard surface finish has visibly failed are to be clearly fenced-off from the public and repaired as new as soon as feasibly possible.

Street Furniture

- 12.4 Undertake monthly checks of all street furniture to ensure that it remains soundly and safely installed. Re-install any loose furniture.
- 12.5 In the case of street furniture containing timber elements, ensure that the timber has not become worn or the preservative treatment eroded by continual use or UV exposure. Any worn or damaged timber should receive an application of proprietary timber preservative to match the colour and treatment of the adjacent timber.
- 12.6 In the case of street furniture containing painted metal elements, ensure that any painted surface has not become worn or eroded through continual use. Any worn or damaged paint work should be rectified by the application of an appropriate paint to match the existing.
- 12.7 Undertake bi-annual checks for graffiti. The contractor should keep accurate records of any graffiti and should make every endeavour to remove / remediate street furniture that is subject to graffiti.

LAP

- 12.8 Undertake an annual inspection of the play equipment in the form of an independent audit by an organisation registered with the Register of Playground Inspectors International (RPiI) e.g. ROSPA to check the functionality and safety of the installed equipment. The result of such an inspection should be sent to the Local Authority Recreation Officer and a copy kept on files by the management company.
- 12.9 Any remedial action required as a result of the annual inspection to make safe the equipment should be undertaken with immediate effect and any failed equipment should be removed or fenced-off accordingly until such a point in time at which it can be fixed.

12.10 Undertake weekly inspection of any play equipment and safety surfacing to check for defects. If defects are identified, the management company should be informed and the play space closed until the issue has been rectified.

SuDS

12.11 To maximise the biodiversity value of features created for surface water attenuation.

12.12 Two features are required to provide surface water attenuation as part of the Sustainable Drainage System (SuDS) design for the site.

12.13 The basins will be seeded with a wildflower mix to form a grassland area that provides opportunities for wildlife whilst discouraging bird species such as wildfowl from using the basins. The grassland will be cut when the sward reaches 100mm and then every six weeks in year 1. In years 2-5 wildflower margins will be cut on an annual basis in July/early August (as a standard hay meadow cut). A summer cut is necessary to maintain a herb-rich sward in the long term. Arisings will be removed to prevent nutrient build-up and encourage less vigorous species to germinate/regrow.

12.14 Surrounding these excavated basins wetland associated shrub and tree species will be planted to provide habitat opportunities for wildlife and discourage usage by wildfowl. See Appendix A: (ii) "Wetland shrub planting" for an indicative list of potential species to be planted. Initially this shrub will be pruned, and where appropriate, coppiced (dogwood and willow), to maintain a compact, dense habit.

12.15 A litter sweep of the attenuation areas to ensure inlets and outlets remain litter and debris free, to ensure they remain fully functional.

13.0 Wildlife Mitigation Features

Objectives

- 13.1 To provide long-term opportunities for wildlife within the new development.

Prescriptions

- 13.2 As detailed on the Soft Landscaping Proposals (CSa/2325/113-114) and described within the previous chapters, a range of wildlife habitats will be created or enhanced including sensitively managed grassland, native hedgerow and tree planting, log piles and hibernacula, and bird and bat boxes.
- 13.3 Management and maintenance prescriptions for habitats are detailed within the previous chapters.
- 13.4 Access points for hedgehogs will be cut into a proportion of garden fences at the site to allow them to utilise foraging and sheltering opportunities within new gardens. Access points have been created near existing habitats likely to be used by hedgehogs (hedgerows and allotments) with links created into and between the larger gardens, which are more likely to support habitats of use to hedgehogs. The holes will be approximately 100mm x 100mm and will permit dispersal by other wildlife such as amphibians. Installation to the correct locations and specification will be checked by an ecologist during the construction phase. The locations of access points are shown on the Hard Landscaping Proposals (CSa/2325/110-111).
- 13.5 A range of durable and long-lasting products for roosting bats and nesting birds will be provided, as detailed within Appendix C. These should not require regular maintenance and the bird boxes will be located on private land.
- 13.6 Regular checks will be made of the bat boxes which will be erected on trees on the boundaries of the development within public areas. The checks will be made alongside routine management activities on at least an annual basis to ensure that none of the boxes are damaged or missing. Any missing boxes will be replaced at the earliest opportunity using the same type of box at the same location unless otherwise agreed with the Council. If any boxes need to be moved or replaced, the advice of a licensed bat worker must first be sought to ensure that no bats would be injured or disturbed as a result, both of which are legal offences.
- 13.7 Log piles and hibernacula will be maintained as mitigation for amphibians and reptiles. New material will be added to log piles as it becomes available from routine management activities and new piles will be made as necessary within the bases of hedgerow. Efforts will be made to prevent the theft of logs from log piles if this becomes an issue (e.g. by netting or moving material to different locations). Any damage occurring to hibernacula will be remedied as soon as possible during the appropriate time of year (April to September) following the advice of an experienced ecologist.

14.0 Maintenance Schedules

General Maintenance Schedule

	Maintenance Operation	Year 1	Year 2	Year 3	Year 4	Year 5
a	Undertake watering to field capacity, as required to ensure healthy establishment of all plant stock. At least monthly.	Mar-Nov As req.				
b	Remove all arisings from maintenance operations	As req.				
c	Ensure all planted areas are kept weed free; no weed cover to exceed greater than 5% in area or 300mm in height.	Monthly.	Monthly.	Monthly	Monthly	Monthly
d	Re-instate any failed plant stock to agreed specification as agreed with client; incl for top dressing with slow release fertiliser @ 50g/m ²	As req.	As req.	-	-	-
e	Ensure all hard surfaces are kept free from litter / leaves and sweep as required.	Monthly	Monthly	Monthly	Monthly	Monthly
f	Apply folia acting / residual herbicide to hard surfaces to prevent ingress of weed and algae growth.	Sept-Oct As req.				
g	Rake-up fallen leaf litter; remove from site	Sept-Dec Monthly	Sept-Dec Monthly	Sept-Dec Monthly	Sept-Dec Monthly	Sept-Dec Monthly

Existing Tree and Hedgerow Maintenance Schedule

	Maintenance Operation	Year 1	Year 2	Year 3	Year 4	Year 5
a	Monitor mature trees for signs of defects / poor health.	Quarterly	Quarterly	Quarterly	Quarterly	Quarterly
b	Aerate root-zone of trees showing signs of stress	As req.	As req.	-	-	-
c	Supply & apply slow release fertiliser to crown spread at base of each tree; 35g/m ² .	As req.	As req.	As req.	-	As req.
d	Undertake routine pruning of trees to encourage good growth and shape.	Annually as req. Oct-Nov	-	Annually as req. Oct-Nov	-	Annually as req. Oct-Nov
e	Remove any dead wood / branches.	Annually as req. Sept	Annually as req. Sept	Annually as req. Sept	Annually as req. Sept	Annually as req. Sept
f	Cutback hedgerow to 5m and reduce lateral growth by 1m. Remove deadwood from canopy.	Jan – Feb	-	-	-	-
g	Manage hedgerow at 5.5m and trim lateral growth annually.	-	Jan – Feb	Jan – Feb	Jan – Feb	Jan – Feb
h	Assess existing hedgerows and undertake infill planting in gaps.	Jan – Mar	Jan – Mar	-	-	-

New Tree Planting Maintenance Schedule

	Maintenance Operation	Year 1	Year 2	Year 3	Year 4	Year 5
a	Inspect tree stakes / ties / guards and replace/remove as required.	Monthly	Monthly	Monthly	-	-
b	Water to field capacity. During excessive hot weather spray crowns	As req.	As req.	As req.	As req.	As req.
c	Supply & apply slow release fertiliser to base of each tree; 50g per tree.	Annually Mar-Apr	Annually Mar-Apr	Annually Mar-Apr	Annually Mar-Apr	Annually Mar-Apr
d	Following strong winds, re-firm base and check stakes for stability.	As req.	As req.	As req.	As req.	As req.
e	Undertake formative pruning of young trees to encourage good growth and shape.	Annually as req. Oct-Nov	-	Annually as req. Oct-Nov	-	Annually as req. Oct-Nov
f	Remove any dead plant material at the end of the growing season.	Annually as req. Sept	Annually as req. Sept	Annually as req. Sept	Annually as req. Sept	Annually as req. Sept
g	Top of mulch layer at base of tree; 1.2m diam. x 75mm depth.	Annually Sept	Annually Sept	Annually Sept	-	Annually Sept

New Woodland / Thicket Planting Maintenance Schedule

	Maintenance Operation	Year 1	Year 2	Year 3	Year 4	Year 5
a	Remove protective fencing after defects liability period.	Once	N/A	N/A	N/A	N/A
b	Inspect shrub shelters/rabbit guards and re-firm / replace; as required.	Monthly	Monthly	Monthly	Monthly	Monthly
c	Prune plant material to maintain form and encourage good growth.	Annually Sept/Oct	Annually Sept/Oct	Annually Sept/Oct	Annually Sept/Oct	Annually Sept/Oct
d	Top up mulch layer; to a depth of 50mm twice annually, as required	Sept & March				
e	Undertake spot herbicide treatment to planting positions to a radius of 300mm.	Every 3 months				

New Hedge Planting Maintenance Schedule

	Maintenance Operation	Year 1	Year 2	Year 3	Year 4	Year 5
a	Tidy up all planting areas removing rubbish, litter from hedge trenches.	Each visit	Each visit	Each visit	Each visit	Each visit
b	Re-cultivate around base of transplants by light hoe to relive soil compaction.	4 times Apr-Oct	4 times Apr-Oct	4 times Apr-Oct	-	-
c	Supply & apply slow release fertiliser to planting areas; 60g/m ² .	Annually Mar/Apr	Annually Mar/Apr	Annually Mar/Apr	-	-
d	Undertake formative pruning of hedges, to encourage growth and promote good form.	Annually, as req. Sept-Jan	Annually, as req. Sept-Jan	Annually, as req. Sept-Jan	-	Annually, as req. Sept-Jan
e	For transplants (Hawthorn); cut back by 50% of new growth following installation and in year 2.	After planting	December	-	-	-
f	Remove any dead plant material at the end of the growing season.	Annually as req. Sept/Oct	Annually as req. Sept/Oct	Annually as req. Sept/Oct	Annually as req. Sept/Oct	Annually as req. Sept/Oct
g	Top up mulch layer to all planting beds; depth 50mm	Annually Sept	Annually Sept	Annually Sept	-	Annually Sept

Shrub Planting Maintenance Schedule

	Maintenance Operation	Year 1	Year 2	Year 3	Year 4	Year 5
a	Remove any protective fencing after first 12 months.	Once	N/A	N/A	N/A	N/A
b	Tidy up all planting areas removing rubbish, litter from planting beds.	Each visit				
c	Dead head flowering shrubs following flowering period	Apr-Oct	Apr-Oct	Apr-Oct	Apr-Oct	Apr-Oct
d	Re-cultivate around base of shrubs by light hoe to relive soil compaction.	4 times Apr-Oct				
e	Supply & apply slow release fertiliser to planting areas; 60g/m ² .	Annually Mar/Apr				
f	Undertake formative pruning of ornamental shrubs, to encourage growth and promote good form.	4 visits Sept-Jan				
g	Remove any dead plant material at the end of the growing season.	Annually as req. Sept/Oct				
h	Top up mulch layer to all planting beds; depth 50mm. Twice annually as required	Sept & March				
i	Edge up planting beds to maintain soil level below adjacent hard surfaces.	4 times annually				

j	Cut back herbaceous / perennial shrubs annually to promote good re-growth and seasonal flowering	Annually Sept/Oct				
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Wildflower and Long grass Areas Maintenance Schedule

Long Grass Areas

	Maintenance Operation	Year 1	Year 2	Year 3	Year 4	Year 5
a	Tidy up all grass areas removing rubbish, litter.	Each visit				
b	Growing season No cutting	May-Sept	May-Sept	May-Sept	May-Sept	May-Sept
c	Dormant season Maintain minimum grass height of 100mm and trim / re-form edges, as conditions allow	Sept-Nov	Sept-Nov	Sept-Nov	Sept-Nov	Sept-Nov
d	Remove fallen leaves from grassed areas; as required	Sept-Nov	Sept-Nov	Sept-Nov	Sept-Nov	Sept-Nov
e	Carry out autumn scarification of all grassed areas; depth 15mm.	1 visit; Oct/Nov				
f	Remove perennial weeds by hand or if necessary, by application of a suitable approved selective herbicide following permission from the Management Company	As req.				
h	Over-seed patchy areas; as required	Annually Sept/Oct	Annually Sept/Oct	Annually Sept/Oct	Annually Sept/Oct	Annually Sept/Oct

Wildflower Grass Areas

	Maintenance Operation	Year 1	Year 2	Year 3	Year 4	Year 5
a	<p>Cut wildflower areas to 150mm height on first cut and then 100mm in subsequent cuts in year 1</p> <p>Cut to 100mm, biannually in year 2 onwards</p> <p>Remove all arisings from site 24 hours after cut</p>	Once sward reaches 150mm in height and every 6 weeks after	<p>Spring cut in March/April if necessary to remove winter growth.</p> <p>Main hay cut in September.</p>	<p>Spring cut in March/April if necessary to remove winter growth.</p> <p>Main hay cut in September.</p>	<p>Spring cut in March/April if necessary to remove winter growth.</p> <p>Main hay cut in September.</p>	<p>Spring cut in March/April if necessary to remove winter growth.</p> <p>Main hay cut in September.</p>
b	Remove perennial weeds by hand or if necessary, by application of a suitable approved selective herbicide following permission from the Management Company	As req.	As req.	As req.	As req.	As req.
c	Over-seed patchy areas; as required	Annually Sept/Oct	Annually Sept/Oct	Annually Sept/Oct	Annually Sept/Oct	Annually Sept/Oct

Amenity Grass Maintenance Schedule

	Maintenance Operation	Year 1	Year 2	Year 3	Year 4	Year 5
a	Remove any protective fencing after first 12 months.	Once	-	-	-	-
b	Tidy up all grass areas removing	Each visit				

	rubbish, litter.					
c	<p>Growing Season:-</p> <p>Maintain grass at height of 25-35mm and trim / re-form edges. Maximum sward height 75mm. Remove fallen leaves prior to mowing.</p>	May-Sept	May-Sept	May-Sept	May-Sept	May-Sept
d	<p>Dormant Season:-</p> <p>Maintain grass at height of 30mm and trim / re-form edges. Maximum sward height 75mm. Remove fallen leaves prior to mowing.</p>	Mar-Apr & Oct-Nov				
e	Remove fallen leaves from grassed areas; as required	Sept-Nov	Sept-Nov	Sept-Nov	Sept-Nov	Sept-Nov
f	Carry out bi-annual spiking to all grassed areas; to a depth of 75mm.	2 visits; Mar/Apr & Sept/Oct				
g	Carry out autumn scarification of all grassed areas; depth 15mm.	1 visit; Oct/Nov				
h	Supply & apply selective herbicide to manufactures recommendations; to all grassed areas.	Annually Sept/Oct	Annually Sept/Oct	Annually Sept/Oct	Annually Sept/Oct	Annually Sept/Oct

i	Supply & apply slow release lawn fertiliser; Spring: 15:10:10 fertilizer @ 35g/m ² Autumn: 5:10:10 fertilizer @ 50g/m ²	Twice annually; Mar/Apr & Oct/Nov				
j	Over-seed patchy areas; as required	Annually Sept/Oct	Annually Sept/Oct	Annually Sept/Oct	Annually Sept/Oct	Annually Sept/Oct

Hard Surfaces, Street Furniture & LAP Schedule

	Maintenance Operation	Year 1	Year 2	Year 3	Year 4	Year 5
a	Ensure all hard surfaces are kept free from litter / leaves and sweep as required.	As req.				
b	Undertake inspection of hard surfaces for patch / worn areas; make good.	Annually	Annually	Annually	Annually	Annually
c	Undertake vacuum cleaning of all standard vehicular surfaces; every 6 months	April & Nov				
d	Power washing of all paved surfaces; every two years	-	As req.	-	As req.	-
e	Undertake bi-annual checks of all street furniture; re-install / adjust any loose fittings	Bi-annually	Bi-annually	Bi-annually	Bi-annually	Bi-annually
f	Treat any worn or damaged timber surfaces	As req.				
g	Re-paint any worn or damaged painted metal surfaces.	As req.				
h	Undertake bi-annual checks for graffiti; remove or remediate.	Bi-annually	Bi-annually	Bi-annually	Bi-annually	Bi-annually
i	Undertake weekly inspection of play equipment and safety surfacing for defects. If identified, close play space until rectified	Weekly	Weekly	Weekly	Weekly	Weekly
j	Undertake annual inspection of LAP; action any points raised by the inspection with immediate effect.	Annually	Annually	Annually	Annually	Annually

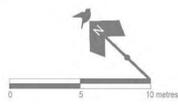
Wildlife Features Schedule

	Maintenance Operation	Year 1	Year 2	Year 3	Year 4	Year 5
a	Ensure all mitigation features are correctly installed as per the recommendations within this document and the landscaping proposals. Remediation to be made as soon as possible.	As constructed.	-	-	-	-
b	Inspect bat boxes for loss or signs of damage or wear. Action as soon as possible following advice from a licensed bat worker.	Annually	Annually	Annually	Annually	Annually
c	Replenish log piles with new on-site material. Create new log piles as necessary.	As req.	As req.	As req.	As req.	As req.
d	Remediate any damage to hibernacula following advice from a licensed ecologist.	April-Sept	April-Sept	April-Sept	April-Sept	April-Sept

APPENDIX A

Detailed Planting Proposals

CSa/2325/112-113



LEGEND

- APPLICATION BOUNDARY
- EXISTING TREES / VEGETATION
- EXISTING TREES / VEGETATION TO BE REMOVED
- Softworks**
- WOODLAND MIX
- WETLAND THICKET MIX
- STRUCTURAL SHRUB MIX
- EXTRA-HEAVY STANDARD TREE
- STANDARD TREE
- ORNAMENTAL HEDGE PLANTING
- NATIVE HEDGE PLANTING
- ORNAMENTAL SHRUB PLANTING
- EXISTING RETAINED GRASS SWARD LEFT TO GROW LONG - Refer to management plan for cutting schedule
- AMENITY GRASS SEEDING - Germinil Seeds 'WF2' Free Draining Sandy Soils', 5g / m² or equal and approved.
- AMENITY GRASS TURF - Rolawn Ltd 'Medallion' turf or equal and approved
- MEADOW GRASS MIX - Germinil Seeds 'RE2 Lowland Meadow', 5g / m² or equal and approved.
- WILDFLOWER MEADOW MIX - Germinil Seeds 'RE3 River Floodplain / Water Meadow Mix', 5g / m² or equal and approved.
- WILDFLOWER MEADOW MIX - Germinil Seeds 'RE3 River Floodplain / Water Meadow Mix', 5g / m² or equal and approved.
- GREAT CRESTED NEWT HIBERNACULA - Refer to ecological reports for details.
- LOG PILES - Refer to ecological reports for details.

NOTE:
 1. Refer to CSA2325/113 for Planting Specification
 2. Refer to document CSA2325_06 for Management Plan
 3. Refer to CSA2325/110-111 for Hard Landscape Proposals

REFER TO CSA2325/113



Planting Schedule for CSA/2325/112-113

City	Name	Age	Height	Form	Grth	CrStm	Bks	Root	Chr	Measure Unit	Density (n/20m ²)	Centres
Herbaceous -												
42	Salix nemoralis 'Ostfriesland'											
Native Hedge Mix (NH1)												
62	Corylus avellana	40-60cm										
63	Crataegus monogyna	30-45cm	Seeking									
31	Ilex aquifolium	30-45cm										
63	Punus spinosa	40-60cm										
31	Prunus spinosa	40-60cm										
31	Viburnum opulus	40-60cm										
Shrub -												
102	Aucuba japonica 'Baccante'	111 or 113	30-45cm									
89	Berberis thunbergii 'Atropurpurea Nana'	20-30cm										
34	Berberis thunbergii 'Red Chief'	40-60cm										
122	Brachyglottis 'Sunshine'	30-45cm										
41	Choisya ternata 'Sundance'	30-45cm	Bushy									
187	Cistus 'Silver Pink'	30-45cm	Bushy									
29	Cornus sanguinea 'Midwinter Fire'	2x	30-45cm	Bush								
33	Cotinus coccinea 'Royal Purple'	30-45cm	Bushy									
50	Escallonia Red Elf	40-60cm										
134	Euonymus fortunei 'Emerald Gaiety'	20-30cm (D)	Bushy									
71	Euonymus fortunei 'Silver Queen'	20-30cm										
152	Hebe 'Majestic'	40-60cm	Bushy									
129	Hebe 'Majestic'	40-60cm	Bushy									
129	Hebe rakaisensis	25-30cm (D)	Bushy									
228	Hypericum 'Hidcote'	30-45cm	Bushy									
89	Ilex crenata 'Convexa'	2x	25-30cm (D)	Bush								
131	Ilex crenata 'Golden Gem'	2x	25-30cm (D)	Bush								
102	Lonicera nidida 'Maigreen'	30-45cm	Bushy									
56	Lonicera pileata	30-45cm										
80	Mahonia aquifolium 'Apollo'	20-30cm	Bush									
131	Osmantinus burkwoodii	30-45cm										
71	Phytolacca 'Abbotwood'	30-45cm	Bushy									
41	Prunella 'Abbotwood'	20-30cm (D)	Bushy									
40	Santolina chamaecyparissus	20-30cm										
43	Sarcococca humilis	15-20cm										
53	Skimmia confusa 'Kew Green'	30-45cm (D)										
42	Sorbus japonica 'Golden Gem'	30-45cm										
78	Viburnum davidii	25-30cm (D)										
169	Viburnum tinus 'Eve Price'	30-45cm										
117	Vinca major	30-45cm										
Shrub - Hedgerow												
1407	Carpinus betulus (Hedge)	1+1	80-100cm	Transplant (seed-raised)								
Shrub - Rose												
63	Rosa 'Kent'	111 or 113	30-45cm									
Structural Shrub Mix (SM1)												
50	Chaenomeles speciosa	1+0	20-40cm									
62	Cornus alba 'Sibirica'	4	40-60cm									
74	Cotoneaster dammeri	30-45cm (D)										
78	Escallonia 'Donard Radiance'	40-60cm										
53	Ilex aquifolium 'J.C. Van Tol'	40-60cm										
26	Ligustrum japonicum	2x	30-45cm									
Trees -												
1	Acer campestre	2x	425-600cm	Standard (extra-heavy)	14-16cm							
4	Acer campestre	2x	300-350cm	Standard (Selected)	10-12cm	Me-200cm						
7	Alnus glutinosa	2x	300-350cm	Standard	10-12cm	Me-200cm						
4	Betula pubescens	2x	300-350cm	Standard (Selected)	10-12cm	175-200cm						
2	Betula utilis 'Jaquemonii'	2x	425-600cm	Standard (Heavy Standard)	14-16cm	Me-200cm						
4	Carpinus betulus	2x	300-350cm	Standard	10-12cm	175-200cm						
14	Corylus colurna	2x	425-600cm	Standard (extra-heavy)	14-16cm							
7	Pinus caleyana 'Chanticleer'	2x	300-350cm	Standard	10-12cm	175-200cm						
1	Quercus robur	3x	425-600cm	Standard (extra-heavy)	14-16cm							
3	Quercus robur	2x	300-350cm	Standard	10-12cm	Me-200cm						
1	Sorbus aucuparia 'Majestic'	2x	300-350cm	Standard	10-12cm	175-200cm						
3	Tilia cordata	2x	300-350cm	Standard	10-12cm	175-200cm						
2	Tilia cordata	3x	425-600cm	Standard (extra-heavy)	14-16cm	175-200cm						
Wetland Thicket Mix (TH1)												
21	Cornus sanguinea	1+1 or 111	80-85cm									
21	Salix caprea	8+1	80-85cm									
21	Salix cinerea	8+1	80-85cm									
8	Salix cinerea	1+1	80-85cm									
16	Viburnum opulus	1+1	80-85cm									
Woodland Mix (WD1)												
13	Acer campestre	1+1	125-150cm	Transplant (seed-raised)								
13	Betula pendula	1+1	100-125cm	Transplant (seed-raised)								
20	Cornus alba	1+1	100-125cm	Transplant - seed raised								
26	Corylus avellana	1+2	125-150cm									
13	Ligustrum vulgare	1+1	125-150cm									
13	Sorbus aucuparia	2x	125-150cm	Feathered								
130	Viburnum opulus	1+1	80-85cm	Seeding (undercut)								

CSa environmental planning
 e ashwell@csaenvironmental.co.uk
 Project: Land West of Chesterton, Oxfordshire
 Title: Soft Landscape Proposals Sheet 1 of 2
 Client: Taylor Wimpey UK Ltd
 Scale @ Size: 1:250 @ A1
 Date: July 2015
 Drawing Number: CSA/2325/112
 Drawn: AB
 Checked: GC
 Revision: D



PLANTING SPECIFICATION

General Guidance

All plant handling to be in accordance with the HTA 'Handling and establishing landscape plants' Part I, Part II and Part III (obtainable from the Horticultural Trades Association) and the CPSE publication: 'Plant Handling'.

All planting to conform to National Planting Specification Guidelines.

The individual setting out of plants on site shall be the responsibility of the contractor and should follow closely the locations shown on the detailed planting proposal drawings supplied by the landscape architect. Contractor to ensure that plants are equally spaced within individual planting groups.

Contractor to ensure that smaller plants are located to the front of plant species groups as shown on detailed planting plans.

Contractor shall maintain existing levels around the base of existing trees and shall undertake all planting works occurring within tree protection zones in accordance with BS5837:2012. Contractor shall not remove or relocate any tree protection fencing without prior consent of the client.

All arisings shall be removed from site and the contractor shall at all times, keep the site free from rubbish and debris.

For the duration of the works the contractor shall keep the site free from injurious weeds as listed in the Weeds Act 1959.

All plants should be supplied at the same size and of the same species as specified in the planting schedules on the landscape proposals plan. Any proposed replacement species or deviation from the planting schedules should be highlighted to and agreed with the client prior to installation.

All plants shall be hardened-off at the Contractor's own nursery or at the source prior to planting out.

All field grown and rootballed trees must have been transplanted or undercut in the nursery no less than 18 months prior to supply.

The Contractor shall carry out the work while soil and weather conditions are suitable. Planting is not to take place during periods of frost or strong winds.

The contractor is to ensure that adequate watering and weed control is provided at the time of planting.

Any topsoil retained on site in stockpiles for use in plantings works is to be stored in heaps no greater than 1.2m in height and is to be kept weed free at all times. Vehicles should be prohibited from tracking over any extent of the storage heaps. Apply proprietary herbicide to any perennial weeds and allow a period of time recommended by manufacturer to elapse before disturbing and re-using elsewhere on site.

Do not use peat or peat based products.

Prior to planting, planting areas shall be cleared of grass and weed growth physically and/or chemically with a proprietary translocated herbicide and a period of time shall be allowed to elapse as recommended by the manufacturer before commencement of soil preparation for planting.

All plants are to be watered thoroughly before planting stage to ensure rootball is thoroughly soaked prior to final backfilling.

Tree Planting

Generally plant trees in pits with minimum dimensions of:

- 1000 x 1000 x 800mm deep for trees in soft planted areas including shrubs/trees and rear gardens.
- Backfill the pits in layers as specified below (from bottom up):
- 200mm layer of compacted inert free draining gravel or pea shingle, wrapped in geo-textile membrane.
- 600mm layer of retained site sourced topsoil (free from weeds), imported topsoil (Multi-purpose grade to BS3882:2007); 400mm layer for feathered trees or smaller.

Break up bottom of tree pit to a depth of 200mm and ensure ground is free-draining.

Loosen edges of tree pit at time of planting by hand, using a fork to ensure good drainage.

Pits should be excavated no greater than 48hrs prior to planting and overwatered as required.

Incorporate a soil conditioner/ameliorant in the form of peat-free tree and shrub compost or well rotted spent mushroom compost into backfill material at the rate of min. 40L per pit.

Backfill topsoil in layers of 150mm, firming at each layer and loosening the pit sides to aid drainage. The surface level of the pit should be 50mm above the surrounding ground.

Trees shall be planted in the centre of the excavated pits.

Trees in soft planted areas to be dressed with a minimum 75mm mulch layer, consisting of pine bark fines, particle size 15-50mm to a minimum diameter of 1000-1200mm where appropriate.

Extra-heavy standard trees shall be staked and supported with a low, double stake consisting of 2x30 75mm diameter x min. 2000mm length, rounded timber posts driven into the ground, 600mm above ground level and fixed to the tree by a proprietary rubber tie or horizontal cross support.

Standard trees shall be staked and supported with a low, single stake consisting of 1x75mm diameter x min. 2000mm length, rounded timber post driven into the ground at 45 degree angle to approx. 450mm above ground level and fixed to the tree by a proprietary rubber tie.

Trees shall be installed with proprietary flexible perforated irrigation pipe with integral cap. Pipe to be installed encircling equally around rootball to the full depth of planting pit, with the final cap section installed just above ground level and nailed securely in place to the adjacent timber stake.

All trees in grass areas to be protected by min. 225mm high x 12-15mm diam, proprietary plastic strimmed/over guards. Where trees have a basal trunk diameter greater than 120mm e.g. semi-mature, then two or more guards should be joined together using jointing tape and then secured in place.

Root Barrier Membranes

Where trees are proposed in close proximity to hard paved areas or proposed service runs, a root barrier membrane is to be installed in accordance with the guidance contained in Table 3 of BS 5837:2005 'Trees in Relation to Construction - Recommendations' and Appendix 4.2P of the NERC Standards 'Trees in Relation to Construction'.

For all proposed trees centred in a location within 3m of an adjacent hard standing/footpath or carriageway/kerb line, a proprietary root barrier membrane will be installed to protect the hard standing and any underground services located beneath from future damage by tree roots.

Root barrier membrane(s) to be installed on the tree side along the back edge of the kerb/edging restraint to the adjacent hard standing and are to extend a minimum 3m in each direction from a point taken perpendicular from the tree trunk to the kerb/edging face.

Root barrier membranes are to extend to a depth as outlined below:

- For trees adjacent to hard standings only (no underground services); install 'Retoot 300' by GreenBlue Urban (01424 717797) or equal approved, ribbed root barrier membrane, to a depth of 300mm, ribs facing tree, joints fixed with jointing tape, install 10mm above final surface level of soft landscaping.
- For trees adjacent to hard standings incorporating underground services; install the following dependent on the depth of underground services:
 - o 'Retoot 600' by GreenBlue Urban (01424 717797) or equal approved, ribbed root barrier membrane, to a depth of 600mm, ribs facing tree, joints fixed with jointing tape, install 10mm above final surface level of soft landscaping.
 - o 'Retoot 1000' by GreenBlue Urban (01424 717797) or equal approved, ribbed root barrier membrane, to a depth of 1000mm, ribs facing tree, joints fixed with jointing tape, install 10mm above final surface level of soft landscaping.
 - o 'Retoot 2000' by GreenBlue Urban (01424 717797) or equal approved,

Exc services 450mm deep

- o 'Retoot 600' by GreenBlue Urban (01424 717797) or equal approved, ribbed root barrier membrane, to a depth of 600mm, ribs facing tree, joints fixed with jointing tape, install 10mm above final surface level of soft landscaping.

Exc services 800mm deep

- o 'Retoot 1000' by GreenBlue Urban (01424 717797) or equal approved, ribbed root barrier membrane, to a depth of 1000mm, ribs facing tree, joints fixed with jointing tape, install 10mm above final surface level of soft landscaping.

Exc services deeper than 800mm

- o 'Retoot 2000' by GreenBlue Urban (01424 717797) or equal approved,

PLANTING SPECIFICATION

ribbed root barrier membrane, to a depth of 2000mm, ribs facing tree, joints fixed with jointing tape, install 10mm above final surface level of soft landscaping.

For locations where a hard standing with or without underground services exists on both sides of the tree e.g. grass verge, then a root barrier is to be installed against both kerb/edging faces.

Shrub Planting

Plant shrubs and groundcover into pre-prepared planting beds consisting of topsoil to a depth of no less than 400mm, covering clean subsoil, mixed with soil conditioner as specified below.

Subsoil to be fully broken-up by main contractor to ensure adequate decompaction and alleviate free-drainage.

Topsoil to be either: existing retained site sourced topsoil (free from weeds) or imported topsoil (Multi-purpose grade to BS3882:2007) or a combination of the two as necessary.

Incorporate a soil conditioner/ameliorant in the form of peat free general-purpose shrub compost or well rotted spent mushroom compost across planting bed in a 50mm layer at the rate of 300g per m², and incorporate to a depth of 225mm.

Dig planting holes for shrubs to be a depth of 200mm and a width or 150mm greater than the source pot size. Arisings are loosened to ensure good drainage.

Contractor to check the locations of all underground services, existing and proposed, prior to the excavation of any tree pits or shrub beds and identify any potential conflicts to the client.

All shrubs shall be dressed with a minimum 50mm mulch layer, consisting of medium chipped tree bark, composted for 2-4 weeks, particle size 15-50mm.

Ensure planting appears random / natural and not formal in accordance with the planting proposal layouts as supplied by the Landscape Architect.

All shrub areas to be dressed with a minimum 50mm mulch layer, consisting of medium chipped tree bark, composted for 2-4 weeks, particle size 15-50mm.

The contractor shall take the necessary precautions to ensure all shrub areas are protected throughout the establishment period by temporary fencing.

Meadow Grass Seeding

All areas to be seeded are to consist of min. 150mm topsoil; either existing retained site sourced topsoil (free from weeds) or imported topsoil (Multi-purpose grade to BS3882:2007) or a combination of the two as necessary.

Final preparation of the seeded areas shall be carried out as to create a fine 10th surface suitable for laying of turves.

Turfed areas are to consist of min. 150mm topsoil; either existing retained site sourced topsoil (free from weeds) or imported topsoil (Multi-purpose grade to BS3882:2007) or a combination of the two as necessary.

Unless otherwise stated, finished levels of turfed areas to be 30mm above adjoining paving and kerbs; 150mm below the dpc of adjoining buildings.

Final preparation of the seeded areas shall be carried out as to create a fine 10th surface suitable for laying of turves.

Prepared areas to be watered thoroughly to a depth of 75mm and lawn establishment fertiliser should be applied at a rate of 40g/m², 48hrs prior to turfing. Fertiliser to be raked into top 25mm of the surface.

All areas to be turfed between April and October with turf, as specified in the planting schedules (Appendix A).

Turves should be laid in a series of straight rows, with staggered joints. All joints are to be closely butted together. Timber planks should be used to spread the load of the installer during laying and areas are to be tampered down to ensure good contact between turves and the soil.

All turves should be laid within 24hrs of delivery.

The contractor shall ensure that all turfed areas are watered fully at the time of installation to the full cultivated depth, and that sufficient subsequent watering is carried out to ensure healthy establishment of the grass sward.

Amenity Grass / Meadow Grass Seeding

Areas to be seeded are to be finely graded to bring to a uniform even grade at the correct finished level and to remove all minor hollows and ridges. All stones and debris greater than 50mm in size to be removed and disposed of off-site.

Seeded areas are to consist of min. 150mm topsoil; either existing retained site sourced topsoil (free from weeds) or imported topsoil (Multi-purpose grade to BS3882:2007) or a combination of the two as necessary.

Unless otherwise stated, finished levels of seeded areas to be 30mm above adjoining paving and kerbs; 150mm below the dpc of adjoining buildings.

Final preparation of the seeded areas shall be carried out as to create a fine 10th surface suitable for seeding.

For amenity grass areas only, a pre-seeding fertiliser shall be applied at a rate of 250g/ha approx. 7 days prior to seeding and raked into top surface e.g. GroRight Lawn Establishment fertiliser by Rotolaw Ltd, slow-release granular fertiliser, 7:10:10 NPK; equal and approved by Landscape Architect.

The area(s) to be seeded between April and October with approved grass seed mix, as specified in the planting schedules at the specified rate. Following seeding, areas are to be hand raked and lightly rolled.

The contractor shall take the necessary precautions to ensure all grass areas are protected throughout the establishment period, with the use of chestnut pale fencing where appropriate.

The contractor shall ensure that all seeded and turfed areas are watered fully at the time of installation to the full cultivated depth, and that sufficient subsequent watering is carried out to ensure healthy establishment of the grass sward.

Wildflower Meadow Grass Seeding

All off any existing vegetation by spraying off with proprietary herbicide and allow a time to elapse as recommended by the manufacturer before commencing any cultivation works.

If time permits, a 'stake seed bed' is to be established, by allowing the graded meadow area to colonise with weeds from the existing soil seed bank following initial cultivation / rotovation and an additional application of proprietary herbicide applied to remove any weed growth.

Areas to be seeded are to be finely graded to bring to a uniform even grade at the correct finished level and to remove all minor hollows and ridges. All stones and debris greater than 50mm in size to be removed and disposed of off-site.

Wildflower seeded areas are to consist of min. 300mm deep existing retained topsoil (free from weeds); subsoil mix (50:50) over existing site subsoil layer. No imported topsoil should be used in the formation of wildflower meadows.

Final preparation of the seeded areas shall be carried out as to create a fine 10th surface suitable for seeding.

No pre-seeding fertiliser shall be applied.

Wildflower seeding is to be undertaken preferably in Spring (Early March to late June) or if not feasible in Autumn (Mid August to October). Where sowing rates are low and sowing is to be undertaken by hand broadcast, the contractor should mix the seed evenly with a fine, dry sand to bulk up the sowing mixture. Seeding by this method should only be undertaken on calm days with no wind, after seeding, areas are to be hand raked and lightly rolled.

The contractor shall take the necessary precautions to ensure all grass areas are protected throughout the establishment period, with the use of chestnut pale fencing where appropriate.

The contractor shall ensure that all seeded areas are watered fully at the time of installation to the full cultivated depth, and that sufficient subsequent watering is carried out to ensure healthy establishment of the grass sward.

General Planting Maintenance

All soft landscape areas to be maintained to BS7370:4:1993.

Sufficient watering should be undertaken by the contractor to establish and maintain healthy plant growth.

The first cut / mow of all amenity grass seeded areas should be undertaken when the established sward reaches 50mm in height down to a height of 25mm, after which all amenity grassed areas should be maintained at a nominal height of 25mm (March to October). All arisings are to be removed from site and composted.

The first cut / mow of all meadow and wildflower areas to be undertaken when the established sward reaches 150mm in height or weeds colonise to a height of 300mm (whichever is sooner), to a nominal height of 150mm.

For spring sown meadow/wildflower meadows, the second cut should take place about 16 weeks after sowing or in September (whichever is sooner), after which all meadow and long grass areas should be cut annually in September, to a nominal height of 100mm, once any wildflowers have set seed, with an additional spring cut in March / April to remove winter growth if necessary.

For autumn sown meadow/wildflower meadows, the second cut should take place in April, after which all meadow grass and long grass areas should be cut in September, to a nominal height of 100mm, once any wildflowers have set seed, with an additional cut in March / April to remove winter growth if necessary.

Meadow areas should be hand-weeded or spot sprayed for any perennial weeds such as docks, nettles and ragwort.

All failed / defective plants identified within the first 5 years of installation should be replaced by the contractor at the soonest available planting season to ensure a continued coverage of growth. Replacement plants should be of the same species and specification of the failed specimens.

Bare areas and areas of dead grass which become apparent should be rectified by overseeding and/or turf re-installation at the soonest available planting season.

All amenity grassed areas and planting beds should receive an application of a proprietary slow release fertiliser twice yearly in the spring and the autumn.

All shrub planting and formal hedges shall be pruned at least twice per annum, removing dead or dying wood, to maintain a healthy, uniform and promote good form.

Dead heading of herbaceous plants including flowering marginal aquatic plants, should be undertaken following flowering.

All planting areas should be kept tidy and free from weeds, trimmings, debris and litter. Weeds should be removed by hand unless where it is unfeasible, whereby weeds can be treated by the application of a suitable proprietary herbicide.

NB - Herbicide usage to be limited to spray usage on calm days (no wind) and undertaken by qualified operatives in accordance with current legislation.

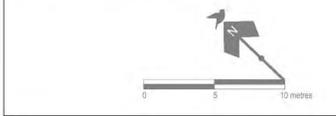
Tree stakes, ties and guards should be checked annually for adjustment and/or replacement/removal as required.

All amenity grassed areas should be scarified annually in the autumn to remove thatch conditions and the build-up of dead grass. Following annual scarification, grassed areas should be thoroughly spiked to aerate soil and improve drainage. NB - Within tree root protection areas (RPAs) as identified on drawing 6081.01, all scarification/spiking should be carried out sensitively by hand and the use of vehicular mounted machinery will not be permitted within these areas.

All plants should be maintained in a disease and pest free state. In all instances, 'event' methods of pest control are to be undertaken prior to any chemical application. The extent that natural methods of eradication are unsuccessful, plants should be treated through the application of a suitable proprietary herbicide/pesticide.

Areas of shrub planting with a bark mulch growth should be topped up annually in the spring to retain moisture and limit weed growth, to a nominal depth of 50-75mm.

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 Project Land West of Chesterton, Oxfordshire
 Title Soft Landscape Proposals Sheet 2 of 2
 Client Taylor Wimpey UK Ltd
 Scale @ Size 1:250 @ A1 Drawn AB
 Date July 2015 Checked GC
 Drawing Number CSa/2325/113 Revision D

NOTE:
 1. Refer to CSa/2325/112 for Planting Schedule and Legend
 2. Refer to document CSa/2325_06 for Management Plan
 3. Refer to CSa/2325/110-111 for Hard Landscape Proposals

Revision	Date	By	Description
C	22.03.16	AB	Minor updates to plant species
D	03.01.16	AB	Updates to specification
B	15.12.15	AB	Minor updates
A	04.08.15	AB	Updated to reflect current housing layout

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APPENDIX B

Management Areas Plan

CSa/2325/114



 Areas to be maintained by management company
 Application Boundary

 <p>Dixies Barns, High Street, Ashwell, Hertfordshire, SG7 5NT t 01462 743647 f 01462 743648 e ashwell@csaenvironmental.co.uk</p>	Project	Land West of Chesterton, Oxfordshire	Date	August 2015	Drawing Number	CSa/2325/114
	Title	Management Areas	Scale	Not to Scale	Revision	-
	Client	Taylor Wimpey UK Ltd	Drawn	ES	Checked	AB

APPENDIX C

Bird and Bat Box Provision

CSa/2325/BN01

BIRD AND BAT BOX PROVISION

The Paddocks, Chesterton

24 August 2015

This note has been prepared to detail the provision of bird and bat boxes at the consented development site The Paddocks in Chesterton, Oxfordshire.

The following products have been selected to provide enhanced nesting / roosting opportunities for bats and certain declining species of bird at the site.

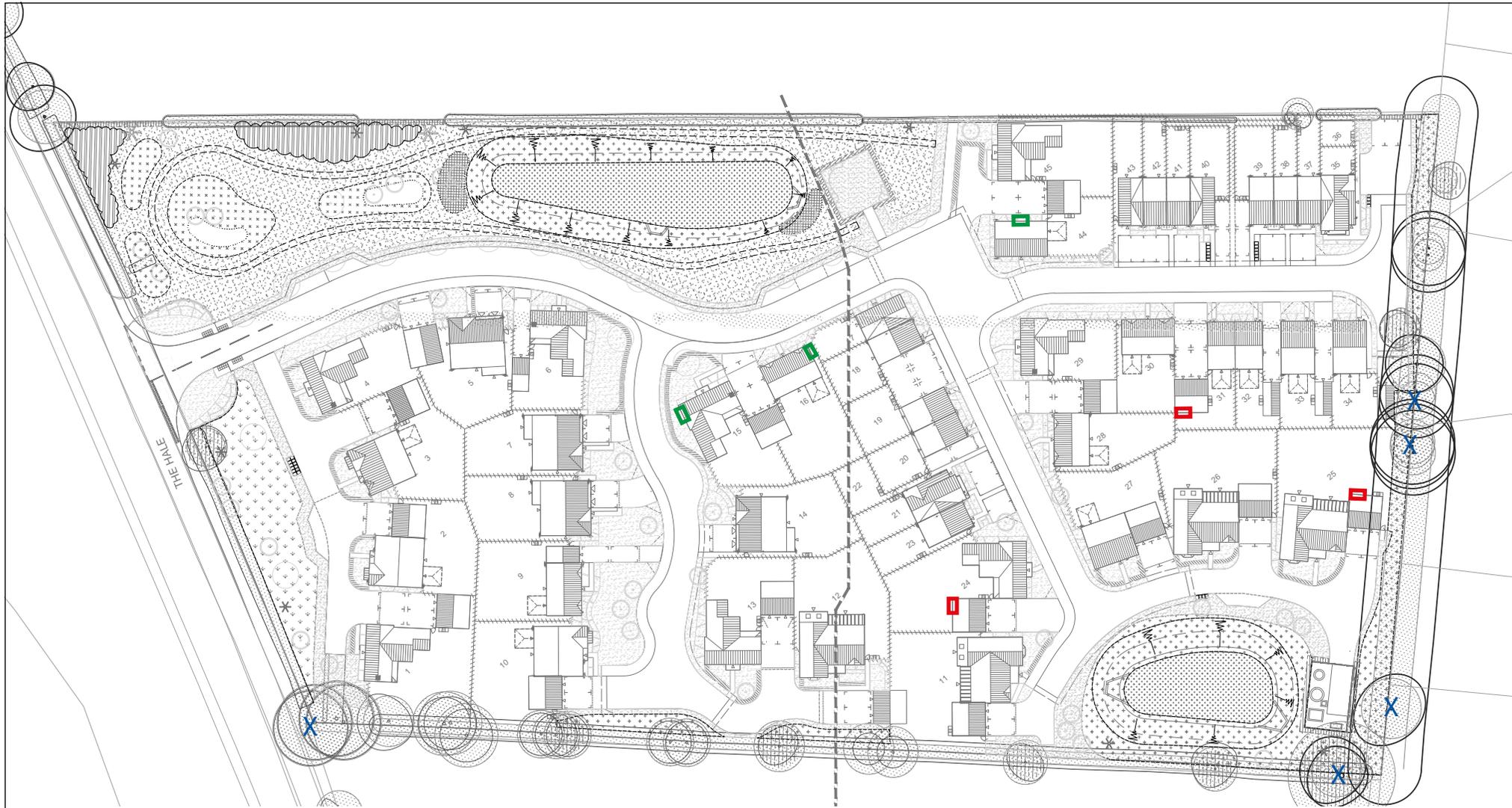
5 x Schwegler 2FN bat boxes to be erected on retained *trees* along the boundaries of the site

6 x house martin nest cups to be erected in pairs on the *external* walls at eaves level

3 x Woodstone (or similar) house sparrow nest boxes to be installed *integrally* within walls. These boxes contain a double chamber to allow nesting by two pairs within each box.

Suitable locations have been on the Bird and Bat Box Location Plan (CSa/2325/115).

The plan identifies which buildings and aspects would be most suitable however the exact positioning of bird boxes on these walls is indicative and should be determined at the time of installation in order to avoid them being directly above, or adjacent to, doors and windows. Boxes on buildings should be installed at eaves level. Bat boxes on trees should be installed at least 2m high and on a part of the tree which allows clear flight lines for bats to and from the box. The locations shown on the plan are also indicative depending on a suitable tree being identified.



Bat boxes on trees
(5 x Schwegler 2FN)



House martin nests on buildings
(6 x, to be erected in pairs)



House sparrow double-chamber nest boxes
(3 x Woodstone Sparrow Terrace)

*Refer to separate note on Bird and Bat Box Provision (dated August 2015) for detailed specifications

**Indicative locations on walls shown only. Exact positioning on aspect indicated is to be determined at time of installation to avoid doors and windows