

Landscape Management Plan: Owen Farm Coleford

Client: David Wilson Homes (South West)

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1 LANDSCAPE MANAGEMENT OBJECTIVES

1.1 The landscape management objectives cover the following maintenance areas:

- Existing and proposed Trees, Shrubs & Hedgerows;
- Grassland Meadows; &
- Proposed Surface Water Balancing Lagoons.
- Equipped Children's Play Areas (LEAP & 2 LAP's)

1.2 Management procedures will be regularly monitored in terms of their success in delivering the 'desired status' within the various landscape management areas, and if necessary alternative measures will be adopted/considered as part of an annual review of the management plan.

1.3 The key landscape resource of the site can be summarised as follows:

- The existing hedgerows and associated tall ruderal vegetation to the site boundary;
- The mature hedgerow trees.

1.4 The key objective of the landscape scheme that accompanies this development proposal is to retain and enhance the existing landscape resource through the provision of a network of green spaces that combine;

- The retained and enhanced trees and hedgerows with native shrub and tree planting;
- New areas of species rich grassland and meadows to enhance wildlife habitat;
- Creation of new surface water balancing facilities creating both permanently wet and seasonal flooded areas providing a variety of habitat opportunities.

Existing and Proposed Tree, Hedgerow and Shrub Planting

1.5 The landscape proposals (Reference: drawing No. Bir.4048_06L & 07L), seek to retain the boundary trees and hedgerows as identified within the JP Associates Ltd Arboricultural Constraints Report (Ref: D21 36 02, July 2012), securing their future welfare and integrating them into the site. Additional native tree and shrub planting will further

enhance and strengthen these boundaries and the existing landscape structure of the site.

1.6 The long-term management objectives for this area can be summarised as follows:

- Retain and reinforce existing vegetation to create a continuous landscape network of native planting;
- Use new native tree and shrub planting to create a robust landscape buffer to the southern boundary of the site.
- Provide an attractive public open space area with the use of native and semi-ornamental shrub and tree species.

Grass Meadows

1.7 Our proposals seek to enhance the site's biodiversity value in the public open space and balancing lagoon areas by the establishment of meadow grassland areas in association with the retention of existing tall ruderal vegetation established to the foot of the boundary hedgerows (*where achievable*). Additional native trees and shrub planting will further enhance the links of these proposed habitats to the existing hedgerow network and countryside beyond.

1.8 The long-term management objectives for this area can be summarised as follows:

- Provide new areas of native tree and shrub planting where appropriate to further reinforce the landscape structure of the site and its connectivity to the adjacent countryside and improve species diversity; &
- Create new meadow areas using appropriate species mixes to create a rich and diverse grassland habitat.

Proposed Surface Water Balancing Lagoons

1.9 The development proposals seek the creation of surface water wet balancing lagoons to provide an adequate area of surface water attenuation. These balancing lagoons will provide further ecological diversification opportunities that the landscape proposals have sought to enhance.

- 1.10 Pond edge meadow, aquatic and emergent planting to balancing lagoons are proposed to encourage wildlife habitat creating a visually attractive setting to this attenuation area.
- 1.11 In association with the existing landscape structure the balancing lagoons together with the additional new native tree and shrub planting will provide a robust green setting, enhancing the visual amenity value of the local area and helping to deliver a range of wildlife habitat.
- 1.12 The long-term management objectives for this area can be summarised as follows:
- To remodel the existing landform and create attenuation areas that can manage the ground water drainage requirements of the local area;
 - Provide new areas of emergent, aquatic and meadow planting that will increase habitat diversity;
 - Deliver new areas of native planting to provide additional habitat and create an attractive setting to the attenuation area and development site; &
 - Strengthen and enhance the existing boundary hedgerow/landscape network of the site.

Equipped Children's Play Areas – LEAP and 2 LAP's

- 1.13 The development will provide a LEAP and 2 LAP play areas (Reference: drawing No. Bir.4048_08K). The play areas will be designed with a 'Natural Play' approach incorporating mounding, boulders and planting but also will find a balance between these natural play elements and more formal play equipment.
- 1.14 The long-term management objectives for this area can be summarised as follows:
- Provide a safe, enriching and stimulating play environment with the use of mounding, planting and play elements to create a diverse level of play experiences.
 - Provide an attractive play area integrated into the public open space through contouring, ornamental shrub and tree planting.

- 1.15 The overall objectives for the Management Plan are as follows:

- To ensure the continued health and welfare of existing trees and hedgerows across the site;
- To establish a functional and attractive public open space network with play opportunities that contributes to visual amenity of the site and enjoyment by users;
- To ensure the surface water balancing lagoons (SUDs) establish and continue to function correctly;
- To ensure best horticultural and health and safety practices at all times;
- To maintain and progress standards by thorough management procedures;
- Procedures to be undertaken in accordance with the Ecological Management Plan;
- Defects in the landscape are identified early and addressed promptly.

2 LANDSCAPE MANAGEMENT PLAN

Elements of Landscape management

2.1 The following is a detailed commentary of the management requirements for the scope of the overall scheme:

- Retained trees;
- Retained hedgerows;
- Amenity grassland;
- Meadow and wildflower grassland;
- Native tree and shrub planting;
- Marginal and aquatic planting;
- Equipped children's play areas (LEAP and 2 LAP's)
- Litter and debris removal;

Environmental Considerations

2.2 The control of invasive and pernicious weeds can be carried out with targeted applications of herbicides containing glyphosate. All pesticides and herbicides should be applied according to manufacturers recommendations and current legislation:

- The Food and Environment Protection Act (1986);
- The Control of Pesticides Regulations (1986);
- The Control of Substances Hazardous to Health Regulations (2002);
- The Environment Protection Act (1990)

2.3 It is the Contractor's responsibility to ensure that he is fully conversant with the requirements of the foregoing legislation and other relevant Codes of Practice, British Standards, rules, guidelines or directives that relate to the use of hazardous materials. The Contractor will make such notifications as are required under the terms of The Food and Environment Protection Act (1986), and will be responsible for replacing plants killed by inappropriate use of herbicides.

2.4 Horticultural peat is not to be used as mulch on any beds or as a soil conditioner.

2.5 Where appropriate use should be made of recycled components.

- 2.6 Arisings from management and maintenance operations should be removed from site and deposited at a legal tip or green compost facility.
- 2.7 Where necessary, management and maintenance staff are to water plants at appropriate times of the day to ensure minimum water evaporation.
- 2.8 Whilst the aim and objectives of this management plan are set out in some detail with respect to habitat management, opportunities for the creation of additional micro-habitats should be taken wherever possible. Allow deadwood, water filled cavities, jagged stumps, splits, fungal growths and holes in tree trunks to remain unless they are creating a safety hazard.

Landscape and Ecological Management Generally

- 2.9 The Landscape Contractor is to visit the site and to fully acquaint himself with local conditions, the nature of the work, the state of the ground as he will be required to execute work upon it, the programme and manner of work and all other matters affecting the proposed work. No claim for extra work on the grounds of lack of knowledge will later be entertained.
- 2.10 Care is to be taken to avoid interference with the established levels and contours of the ground, and to avoid damage to footpaths, roads, drains, manholes and existing structures and vegetation. Damage so occasioned is to be made good at the contractor's expense.
- 2.11 All work shall be carried out by experienced operatives holding relevant horticultural qualifications, training certificates, or under the supervision on site of such a person. All works detailed in the following specifications shall be carried out in accordance with good horticultural practice, using materials, plant and machinery appropriate to the task, undertaken in such a manner that avoids damage and/or nuisance to the site and its surroundings. Any plant material that dies as a result of the contractors operations or omissions shall be replaced by the contractor at his own expense during the next planting season.

Litter Removal

- 2.12 The Contractor shall ensure that the entire site is kept free of litter and other debris through a regular programme of monitoring, collection and disposal, coinciding with visits to maintain grassed areas and planting.

- 2.13 Particular care shall be taken to remove all broken bottles, glass, tins, sharp objects and other items likely to constitute a hazard to the public.
- 2.14 The maintenance contractor shall take particular care when carrying out litter collection to ensure that any discarded needles or syringes are removed as soon as they are discovered. The contractor is to ensure such items are packaged separately from other litter, and be contained within appropriately labelled, puncture-proof sharps containers and disposed of in accordance with current health and safety legislation.
- 2.15 The Contractor must ensure that all operatives likely to come into contact with needles and syringes have been instructed in the means of safe collection and disposal, and that they have been issued with, and wear, adequate protective gloves and footwear to protect against penetration of needles.
- 2.16 All litter and debris shall be removed off site to an authorised tip.
- 2.17 This shall be carried out in accordance with the Code of Practice on Litter and Refuse issued under Section 89 of the Environment Protection Act (1990).

Retained Trees

- 2.18 All tree works and their management are to be agreed with the Local Authority. Any specified tree surgery works will be carried out in accordance with BS 3998: 1989 'Recommendations for tree work', Health & Safety legislation and relevant best practice. Prior to the commencement of works the Contractor shall provide valid proof of the required Public Liability Insurance and a full working method statement and risk assessment.
- 2.19 Prior to commencement of works all trees are to be inspected for nesting birds and potential for roosting bats by an approved Ecologist. If possible works should be undertaken outside the birds nesting season (nesting season – late February to end of August).
- 2.20 At each maintenance visit, areas of existing vegetation shall be cleared of litter in accordance with the section detailed above.

- 2.21 A visual inspection of retained individual trees and existing vegetation within 10m of public paths shall be carried out at every visit. Any damaged, diseased or dangerous timber shall be reported to the operations manager, for an application to be made to the Local Planning Authority under the Town & Country Planning (Trees) Regulations 1999 if it is considered hazardous to public use of the area.
- 2.22 A visual inspection of the entire areas of existing vegetation shall be made annually following the commencement of the maintenance and management period. Any damaged, diseased or dangerous timber shall be reported to the operations manager, for an application to be made to the Local Planning Authority under the Town & Country Planning (Trees) Regulations 1999 if it is considered hazardous to public use of the area.
- 2.23 Where appropriate felled branches will be placed deep within the undergrowth to create 'eco stacks' to encourage wildlife. Unwanted material will be removed from site and either chipped for mulch or taken to the Contractor's approved tip.

Retained Hedgerows

- 2.24 Continued management of hedgerows, identified as H1, H2 and H3 within the JP Associates Ltd Arboricultural Constraints Report Ref: D21 36 02, (July 2012), will take place to maintain the hedges at a base width of between 2-3m, and a height of 2-3m. All works should be agreed with the local planning authority prior to commencement.
- 2.25 Where required to facilitate the installation of fences to property boundaries, localised pruning works of hedgerows will be carried out. All works should be agreed with the local planning authority prior to commencement.
- 2.26 All works are to be carried out in accordance with current best practice and times to avoid the birds nesting season, between late March and mid August.
- 2.27 Prior to the commencement of any works hedgerows are to be inspected by a suitably qualified person to ascertain the presence of any protected species. If any such species are found a suitable migration strategy must be agreed in advance of any works, with the local planning authority.
- 2.28 Any dead sections of hedgerow should be removed and in-filled using appropriate native species, as detailed on the landscape proposals Bir.4048_06L & 7L.

- 2.29 At each maintenance visit, retained hedgerows within public open spaces shall be cleared of litter in accordance with the section detailed above.
- 2.30 A visual inspection of retained hedgerows (and associated hedgerow trees) within 10m of public paths shall be carried out at every visit. Any damaged, diseased or dangerous timber shall be reported to the operations manager, for an application to be made for works to trees to the Local Planning Authority under the Town & Country Planning (Trees) Regulations 1999, if it is considered hazardous to public use of the area.
- 2.31 Where appropriate, felled branches from hedgerow trees will be placed deep within the undergrowth to create 'eco stacks' to encourage wildlife. Unwanted material will be removed from site and either chipped for mulch or taken to the Contractor's approved tip.
- 2.32 Following the erection of the 2m high perimeter fencing to plots 54-63 and 138-151 on the north west and south west boundaries it is the intention of David Wilson Homes to transfer the responsibility and management of hedgerow H1 and H3 (as identified in JP Associates Ltd Arboricultural Constraints Report Ref: D21 36 02, July 2012) back to the owners of Owen Farm.
- 2.33 Where hedgerows are contained within private gardens to plots 3, 4 & 8-38, hedgerow H5 and H8 (as identified in JP Associates Ltd Arboricultural Constraints Report Ref: D21 36 02, July 2012) to the north east and south east boundaries will be retained and managed by the home owner.

Amenity Grassland

- 2.34 Prior to cutting all areas shall be cleared of litter and debris in accordance with the section detailed above.
- 2.35 All operations shall be carried out using machinery appropriate to the task, cylinder, rotary or mulch mowers and when weather and ground conditions are suitable.
- 2.36 Operations shall be suspended where ground conditions prevent the use of machinery without damage to the ground surface. Where operations are suspended due to unsuitable conditions additional maintenance visits may be required in order to maintain the sward within acceptable growth limits.

- 2.37 During each maintenance visit the Contractor shall cut adjacent to fences, walls, kerbs, paths, trees and other boundaries or obstacles using equipment suitable to the task. Strimmers shall not be used around the base of trees. The frequency of cuts shall remain flexible in order to accommodate growth rates and weather conditions. As a general guide cutting is likely to be required every two weeks on high maintenance areas, ensuring that the sward height does not exceed 75mm and that the presence of flowering weed species is avoided. The height of cut shall be 30mm. The Contractor is required to assess growing conditions and adjust maintenance schedules as necessary, taking into account bulb planting where appropriate.
- 2.38 All cuttings are to be evenly dispersed over the ground.
- 2.39 Following cutting, all grass clippings and other debris shall be swept from adjacent hard standing areas and removed from site to an authorised tip, or dispersed over the plot.

Wildflower/Meadow Grassland

- 2.40 Prior to cutting all areas shall be cleared of litter and debris in accordance with the section detailed above. To maintain diversity, all meadow and wildflower grass areas will be cut twice annually: firstly at the end July following flowering; and secondly in September of April, subject to weather conditions. All arisings are to be removed from site unless otherwise directed. Grass will be cut to 50mm with a forage harvester or similar.

Tree and Shrub Planting

- 2.41 Tree and shrub planting will be attended to three times during the growing season (April-September) and once during the dormant season (October-March inclusive). At each visit the following operations are to be carried out.
- 2.42 Before work commences, all areas shall be inspected, and all debris removed in accordance with the section detailed above.
- 2.43 All plants shall be checked and firmed up in the ground as necessary.
- 2.44 Any damaged shoots or branches shall be pruned off plants using secateurs, cutting back to above a live, outward facing bud or shoot.

- 2.45 Weed growth within planting areas shall be eliminated during the summer visits with a suitable translocated herbicide such as "Round-up" glyphosate herbicide, in line with the manufacturer's instructions and in compliance with the Pesticides Acts (1998). Tree and/or shrub shelters, if fitted, shall be lifted as necessary to achieve weed control, and re-firmed in the ground after completion of the work. Dead weed material shall be removed during the following visit to site.
- 2.46 Grass growth within planting beds shall be treated during the winter visit with a suitable residual herbicide such as "Kerb" (pbi), in line with the manufacturer's instructions and in compliance with the Pesticides Acts (1998).
- 2.47 Planting shelters (if fitted) shall be checked at each visit, stakes firmed up as necessary, and ties adjusted. Any missing or vandalised shelters or ties shall be replaced and lopsided shelters straightened.
- 2.48 Any dead trees and shrubs shall be removed and the resulting hole to be filled. Replacement planting to be carried out during the next planting season, or as agreed in main contract documentation.

Specimen Tree Planting

- 2.49 All staked trees shall be inspected on each maintenance visit, and any trees which have died or have suffered physical damage such that they no longer provide any useful landscape function, shall be removed from site, complete with the stake, and the ground reinstated.
- 2.50 Mulched areas around trees shall be maintained to an acceptable standard (see details on mulching standard set out below in reference to ornamental shrub planting).
- 2.51 At the beginning and end of each growing season all stakes ties and guying systems shall be inspected. Any looseness, constriction or abrasion shall be corrected by adjustment or replacement as required. Where the support of a stake is no longer required the stake shall be removed from site.
- 2.52 Any trees which have died as a result of the contractors operations or omissions shall be replaced by the contractor at his own expense during the next planting season.

- 2.53 Where the operations manager has agreed that plant deaths have arisen due to circumstances out of the control of the contractor, replacement planting shall be instructed by the Operations Manager and paid for at an agreed rate.

Marginal and aquatic planting

- 2.54 A visual inspection of all marginal and aquatic planting areas shall be carried out on each maintenance visit. The contractor will ensure that all planted areas are retained free from rubbish or any other debris.
- 2.55 Any blockages that might be prohibiting natural water flow or drainage e.g. inlet and outlet gullies, will be removed and debris taken away. If the contractor becomes aware of any further drainage issue, he shall notify the site manager immediately.
- 2.56 All planted areas are to be kept free of all invasive weeds, by cutting just below ground level, or pulling by hand.
- 2.57 Grassed banks shall also be kept litter and debris free; where steep gradients have been created for habitat creation and improvement, the contractor shall monitor the slopes for any signs of erosion, and report such matters to the site manager.

Equipped Children's Play Areas (LEAP and 2 LAP's)

- 2.58 At each maintenance visit, areas shall be cleared of litter and debris in accordance with section as detailed above.
- 2.59 All equipped areas for play shall be inspected and maintained in accordance with requirements of the local planning authority, BS EN 1176/77 legislation and good practice guidelines from the Royal Society for the Prevention of Accidents (ROSPA) and other advisory bodies.
- 2.60 Recorded inspections shall be carried out at a frequency determined by the equipment, safety surfacing its usage and the local authority policies. A recorded visual assessment shall also be undertaken at the time of every visit to the site by the maintenance contractor when carrying out other operations, and action taken to remedy any observed hazard, defect or act of vandalism.
- 2.61 Quarterly inspection carried out by qualified staff to identify wear and tear issues of play apparatus including safety surfacing.

- 2.62 All inspections (as above) to be done by the contractor that are Register of Play Inspectors International (RPII) trained to requisite level:

Routine visual (to be identified as every visit to site by contractor)
Operational (to be identified as weekly)

- 2.63 A specialist engineer shall carry out certified inspections twice annually, and permanent record maintained to ensure continued compliance with legislation.

- 2.64 Contact details for the maintenance contractor will be provided to all play areas and signage to be located in visible location indicating contact numbers for the general public in case of a problem, defaults in equipment or emergency. This will be responded to promptly by the maintenance contractor.

Should the signage be removed or vandalised this is to be replaced/repaired promptly by the maintenance contractor.

- 2.65 General maintenance shall be undertaken as required in strict accordance with the manufacturer's recommendations. Unsafe items will be made safe or repaired within two weeks. Dangerous items will be removed immediately or cordoned off to prevent use.

- 2.66 The manufacture or specialist engineer shall approve replacement parts, which may be required from time to time.

- 2.67 Maintenance contractor to retain a record of all warranty inspections, maintenance, repairs and modifications to playgrounds of playground equipment.

3 REVIEW

Review of Management Plan

3.1 It is proposed that the Landscape Management Plan will be reviewed annually allowing for minor variations in maintenance or timing of work. The management plan will be revised every 5 years to take on more major changes such as the exclusion of operations.

3.2 It is anticipated that there will be an annual review of the site looking at the following:

Pedestrian routes and desire lines;

Litter;

Usability of the public open space and Play areas; &

Success of the surface water balancing pond area.

It is anticipated that following the review, any problems or changes that are impacting on the landscape will be accommodated with the agreement to the Local Authority.

Management Scope: Maintenance Activity	January	February	March	April	May	June	July	August	September	October	November	December
Litter and debris removal												
Pick all litter from areas of hard and soft landscape and remove from site.	.	.	.	.	.	.	.	.	.	.	.	.
Balancing ponds & ditches (SUDs)												
Maintain grassland as detailed.				.				.				
Monitor functionality of ponds. Remove blockages and identifying and rectify damages as it occurs.	.	.	.	.	.	.	.	.	.	.	.	.
Remove silt build up.	Approximately 5 years after installation											
Equipped children's play area												
Visually inspect children's play areas. Observe any hazards, defect or act of vandalism. Weekly inspection by qualified staff member. Twice annual inspection carried out by specialist engineers.	.	.	.	.	.	.	.	.	.	.	.	.
	Initially frequency of play area maintenance to be every visit. To be reviewed / determined more accurately once in use and usage pattern can be confirmed. Maintenance to be conducted on a site specific regime and in accordance with Kettering Borough Council policy.											

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