



**PROPOSED HOUSING
WATERS EDGE, WHITEHAVEN**

LANDSCAPE MAINTENANCE & MANAGEMENT PLAN

GLEESON HOMES LTD

28.11.20

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WESTWOOD LANDSCAPE LIMITED
REGISTERED IN ENGLAND NO. 10582018
PART OF THE LINTON GROUP



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1.0 Introduction

- 1.1 This report has been prepared to accompany a Planning Application for 40 houses on the south-western edge of Whitehaven on a brownfield site to the west of High Road.
- 1.2 The report will detail the Landscape Management requirements and incorporate measures to protect the existing trees and shrubs during the construction and maintenance phases.
- 1.3 Westwood Landscape, Chartered Landscape Architects have been appointed by Gleeson Homes Ltd to develop detailed Planting Design proposals and a Landscape Maintenance and Management Plan which fully complies with the Planning requirements.

2.0 Management Plan Objectives

The landscape management strategy will ensure that the design objectives are realised and sustained in the long term. The landscape and ecological objectives can be summarised as:

- Create and sustain a high quality attractive landscape setting and environment for the benefit of both residents and the wider community providing a stimulating range of landscape spaces for the enjoyment and use by the community whilst being sensitive to the existing urban edge and adjacent rural coastal landscape character.
- Maintain the integrity and quality of the landscape resources so that they fulfil the design intentions and make a positive contribution to the character of the residential development site and surrounding area.
- Capitalise upon the views from the site, considering both the existing and proposed houses, and consider the inter-visibility between properties in more localised views.
- Enhance the local biodiversity and promote species diversity. Create new habitats including species rich meadow and native hedgerow.
- Ensure that plant species selection is suitable to withstand the severe coastal environment. Create some shelter from prevailing south-westerly winds without loss of views.
- Maintain a safe and accessible landscape linking with the existing public and informal footpath network.
- Establish trees, hedges and shrub areas which define and enhance private gardens and streetscapes, reinforce boundaries, provide shelter and create year-round colour displays with high evergreen content. This will include trees along the access roads to create avenues to the streetscape with low hedges and flowering shrubs to enclose and divide gardens and open spaces. Specimen shrubs will provide focal points to add some immediate localised maturity to the landscape and taller shrubs and climbers will visually soften fences and walls.
- Accommodate the requirements of the service statutory authorities keeping access and easements clear.
- Ensure that the maintenance requirements for the landscape areas are minimised through design and specification of high quality, robust materials from sustainable, energy efficient sources and appropriate plant species.

3.0 Proposed planting

- 3.1 The planting design includes boundary and plot delineation hedges, bold shrub planting, streetscape trees, tall specimen shrubs and flowering ground cover concentrated along the access roads, high-profile corners and focal points to create bold colourful displays and partially enclose some of the front gardens to give some semi-privacy and variety within the estate.
- 3.2 Sensitive treatment of the west boundary is required through the inclusion of native trees within the open space to add height and provide some localised shelter from prevailing winds. These trees combined with two sections of native hedgerow, tall shrub groups and small areas of species rich wildflower grassland which will enhance the ecological value of the site through increased diversity. The intention is that the native hedgerow would be extended as part of the development on the adjacent land to enclose the POS at the edge of the footpath which is a more sensible boundary than the current development boundary which relates to the former land use.
- 3.3 Feature shrub beds at high profile locations will form colourful displays to complement the flowering shrubs in the private gardens which have been selected to provide year-round colour and high evergreen content for winter interest.
- 3.4 Rabbit damage is likely in this setting therefore guards have been specified for native hedge plants and trees. Further protection may be required if rabbit activity is significant in the ornamental shrub beds which should be monitored by the Management Company.
- 3.5 The plant schedule on drawing WW-01 provides details of the trees and shrubs proposed. Species have been selected which are appropriate to the site conditions, topsoil and situation.

4.0 Specification for landscape Maintenance and Management works

- 4.1 **TOPSOIL CULTIVATION** In accordance with BS 3882. Apply glyphosate herbicide prior cultivation and allow the recommended period before further action. Ensure ground is free draining by breaking up subsoil and installation of land drainage as required. Do not work the soil in frozen or waterlogged condition. Remove any debris and stones greater than 50mm from surface and cultivate to suitable tilth for planting. Rake surface to achieve required level flush with adjacent paving for turf and 50mm below for planting to allow for mulch layer and smooth flowing contours for open space areas without hollows or soft areas. Topsoil depths to be minimum 150mm for grass and 450mm for planting. Site topsoil to be supplemented with imported topsoil in accordance with BS 3882. Shrub beds in grass areas to be neatly cut to layout shown.
- 4.2 **PLANTING** Plant material shall conform to the National Plant Specification and be healthy, vigorous specimens, well rooted but not pot bound, free from pests and disease, hardy and undamaged by transport operations in accordance with HTA 'handling and establishing landscape plants'. Planting and turfing to be in accordance with BS 3936 and 4428. Plant species substitutes will be permitted to accommodate availability and to include stock of particular good quality in nursery provided these are of a similar habit, size, colour, value etc and that they are approved by the Landscape Architect. Native species to be local provenance. Bare root and rootballed plants to be planted between November and March. Backfill of planting holes and tree pits to be excavated topsoil with 25% by volume tree and shrub planting compost. Shrub pits to be generally 300 x 300 x 300mm or 75mm wider and deeper than the root spread. Tree pits to be 900 x 900 x 600mm or 150mm wider than the root spread. Stakes to be two 75mm diameter pointed stakes driven until firm and trimmed to 900mm above G.L. with 50 x 100mm crossbar screwed to stakes. Rubber tree cushion nailed to crossbar and rubber tree belting nailed to secure tree. Single 75mm diameter stake for bare-rooted trees with rubber tree belting with spacer. Apply slow release fertiliser (16:10:10) at rate of 100g/ sq.m. to planting areas and 250g per tree. Thoroughly water planting.

- 4.3 **TREE ROOT BARRIER** At locations where root restriction is required adjacent to service positions as directed by the Landscape Architect Greentech Ltd root barrier 600mm to be installed in accordance with manufacturers guidelines.
- 4.4 **TREE RABBIT GUARDS** If rabbit activity is noted in the area and guarding is authorised each bare-rooted native plant hedge plant to receive a 12/14 weight 900mm cane and 60cm clear spiral guard. Trees to receive 90cm spiral guard. If extensive rabbit activity is observed rabbit fencing to ornamental areas will be required as directed by the Landscape Architect.
- 4.5 **MULCH** Spread 50mm layer of general purpose bark mulch free from large sticks, and debris over all shrub areas, 800mm wide strips for hedging and 800mm diameter circles for tree pits in grass with neatly trimmed edge.
- 4.6 **SEEDING AMENITY GRASS** Following cultivation preparation specified above apply Boston Seeds Low maintenance amenity mix or similar approved at a rate of 35gms/ sq.m. and roll with quad or hand drawn ballast grass roller. Apply water with sprinkler hose in dry conditions to ensure germination. Levels to be flush with adjacent paving following firming and settlement of topsoil. Further stone-picking, top-dressing and re-seeding of bare patches to ensure uniform, level grass is established. Re-roll as required at first cut stage.
- 4.7 **SEEDING WILDFLOWER GRASS** Prepare as for amenity grass and sow 3-5 g/ sq.m. of mix BS1M supplied by Boston Seeds and applied in accordance with their recommendations.

5.0 Protection of existing trees and hedges within or close to site boundary

- 5.1 There are no trees or hedges within the site but some small trees adjacent to the site boundary.
- 5.2 These measures are only required if maintenance operations may affect the Root Protection Area (RPA) of trees beyond the boundary. This can be measured as a radius from the trunk of 12 times the trunk diameter at 1.5m above ground level. Trees to be protected in accordance with British Standard 5837:2005 Trees in Relation to Construction. Signs should be erected on the fencing to say 'CONSTRUCTION EXCLUSION ZONE FOR TREE PROTECTION'. The fencing shall be retained for the duration of any approved works. Refer to detailed fencing drawing Appendix 1.
- 5.3 Protective fencing must remain intact and in place, and protection procedures must be adhered to throughout the construction period. Removal of protective fencing should be the last job carried out on completion of the project.
- 5.4 No mechanical traffic should be allowed within the tree RPA, since this could cause compaction and damage roots. No excavations of any kind to take place within the root zone area of protected trees. No materials should be stored within the RPA or any ground level increase. No fires to be lit within the RPA.
- 5.5 In certain circumstances it is possible to accommodate construction activities within the distances recommended by the B.S. 5837:2005 calculation. This may be unavoidable for the viability of the project but will not necessarily lead to tree damage. Such intrusive work within the RPA should be restricted to one side of the tree and the protection zone extended on the other sides to compensate. In these circumstances sympathetic construction methods must be implemented. Any unavoidable alterations required to the surface above the root zones within the fenced off Root Protection Area should only be carried out after having first produced specific method statements for these activities without the use of mechanical excavators i.e. all works within this zone should be carried out by hand. These should be submitted by the contractor to the Chartered Landscape Architect or Arboriculture Consultant for approval.

5.6 Seven days written notice shall be given to the Local Planning Authority that the protection measures are in place prior to commencement of the approved works, to allow inspection and approval of the protection fencing and signage.

6.0 Management Tasks

The following tasks should apply and can be summarised as:

YEAR 1

- **Existing trees** and shrubs within site and adjacent to boundary. Arboricultural monitoring survey at the end of the first year to check for signs of deterioration, particularly for the veteran trees. Action any recommendations arising. Pruning to achieve a uniform lower height for the shrubs, maintain healthy growth and treatment of any pest and disease occurrence. For trees remove any storm damage or deadwood and prune to maintain a balanced crown with suitable ground clearance in public areas to maintain safety. Pruning to proceed in September to December to avoid bird nesting season and wildlife disturbance.
- **Proposed Trees.** Check stakes and ties 12 times, prune once, fertilise once, water as required. Replace failed plants. Existing trees to be monitored for health and appropriate pruning and pest & disease control adopted. Pruning to remove dead, diseased, crossed or dangerous branches including trees growing outside the site boundary with branches overhanging the site. Treat for pest and disease emergence as required to maintain healthy growth.
- **Ornamental shrubs and hedges.** Apply herbicide 6 times, selective hand weed 6 times, re-firm plants 12 times, check canes and guards 12 times, prune once, fertilise once, water as required. Treat for pest and disease emergence as required to maintain healthy growth. Replace failed plants. Top up mulch to maintain uniform cover. For new hedges pruning will be to control overhanging branches and maintain healthy growth for the first year until the target hedge height is exceeded when a uniform height and width cut will be required.
- **Wild flower grassland** species rich grassland areas will be maintained in order to prevent ecological succession and to maintain a healthy structural diversity. A cut should be undertaken twice in year 1 in late August and late September to ensure that all the species have seeded. The sward should be cut down to a minimum of 8 cm to maximise the value of the retained sward for invertebrates. In addition, 10% of the area should be retained as a refuge each year to provide habitat for invertebrates, however these areas should be rotated so that each refuge area is cut at every second rotation. All arisings should be left in situ for a week to allow invertebrates to move into the retained areas and then removed. Spot herbicide to control invasive species and prevent establishment of seeded tree species such as *Salix spp*, *Prunus spinosa* and *Acer spp* which will quickly establish and change the habitat and character of the area. Monitor the spread of Dock, Nettle and check for signs of Himalayan Balsam and Japanese Knotweed. Apply Glyphosate herbicide repeatedly to control spread. Monitor species diversity and percentage cover of each species. Mow grass at paved edges 6 times (90cm width) to prevent obstruction to walkers and untidy edge. Replace failed areas.
- **Amenity grass.** Remove debris, mow grass 16 times minimum with additional cuts if required, trim edges as required. Water as required. Apply Spring fertiliser and weed/ moss killer as required. Top dress, aerate and re-seed patches as required to maintain a uniform healthy sward. Replace failed areas.
- **Invasive Weeds.** Monitor regularly at each herbicide inspection for noxious invasive weeds registered in Schedule 9 of the Wildlife and Countryside Act updated 2013 including in particular Japanese Knotweed *Fallopia japonica*, Himalayan Balsam *Impatiens glandulifera* or Giant Hogweed *Heracleum mantegazzianum*. Government guidance states that it is an offence to allow such weeds to spread to other areas and therefore prompt treatment to eradicate them is advised.

YEARS 2 – 10 and on-going annual maintenance

- As for year 1 with reduction in herbicide and hand weeding as ground cover foliage extends. Anticipated 30% reduction in year 2 and further 30% in year 3. Application of fertiliser as required.
- Remove tree guards where applicable at end of year 2 and stakes from year 3 onwards when trees are showing evidence of adequate support. Replace any failed plants within the defects period specified by the Planning Authority.
- Pruning to maintain healthy growth appropriate target habit for each species and maintain co-dominance of species in mix to prevent one species taking over. Also to maintain adequate foliage cover at lower level to prevent bare patches and loss of screening effect. Dead wood and suckers to be removed.
- Monitoring of pests and diseases and application of appropriate pesticides, fungicides and herbicides as required. DEFRA to be contacted if pests observed which have been identified as significant risk of spreading. Planting maintenance standards in accordance with BS4043 BS 7370-4 (pruning) and BS 3998 (tree work).
- The wild flower grassland will continue to require an annual cut in September to selective areas as required with approximately 50% areas being left undisturbed and spot application of Glyphosate herbicide to prevent the spread of invasive species or the succession to scrub and woodland. All as described for Year 1. The annual cut will prevent the establishment of new trees and shrubs but spot application of some herbicide may also be required to prevent new tree seedlings becoming established.
- For new hedges pruning will be to control overhanging branches and maintain healthy growth for the first 2-3 years until the target hedge height is exceeded when a uniform height and width cut will be required. For established hedges cut back to the previous years' pruning line to maintain a uniform height and width. Remove all arisings.

7.0 Responsibility and Programme for Management Tasks

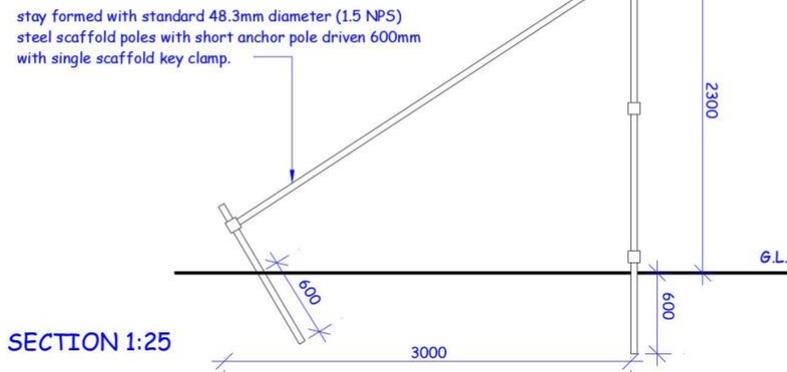
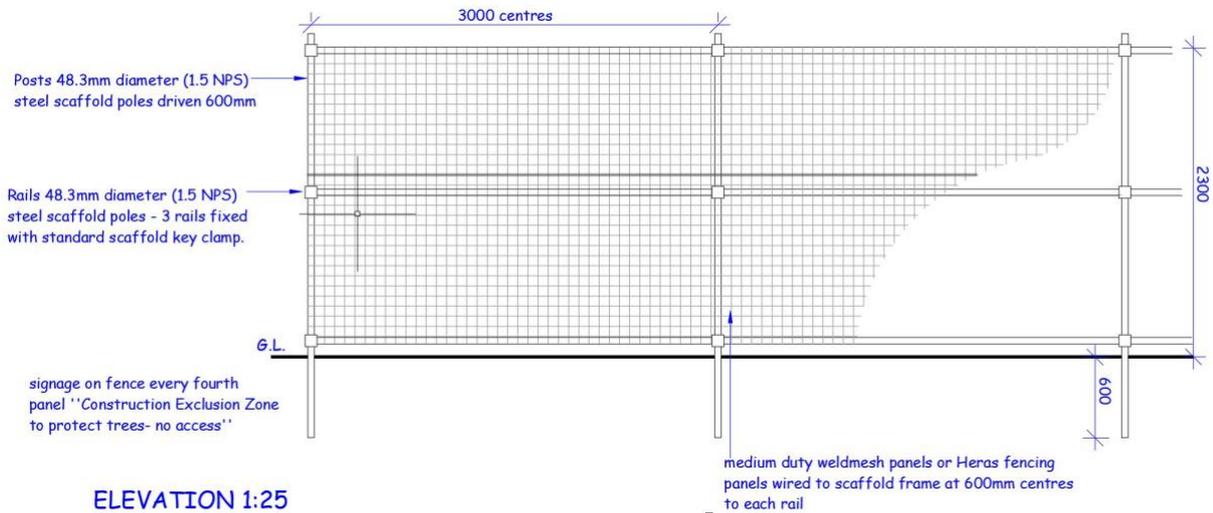
Gleeson Homes Ltd will be responsible for implementing the Landscape Management tasks including replacement of defective planting during the Defect Liability Period which is 10 years. The communal open space areas shown on drawing number WW-01 Landscape Management Plan will be managed by a Management Company and the private gardens will be managed by residents on completion of purchase.

The programme for the Management Company maintenance tasks is indicated on the Landscape Management Scheduled Tasks in Appendix 4 and should commence on completion of the Contract Phase Works to the satisfaction of the LPA.

The nominated landscape management contractor appointed by the Management Company must set up a system which identifies the precise areas to be maintained and the particular specifications which are appropriate for the landscape type. Clear instructions and guidance for an operative should be included on a pro forma for each area which records the date the operation is carried out and by which operative and the fact that the operations were undertaken satisfactorily. This facilitates verification of the work by representatives from Management Company or from the LPA.

APPENDIX 2

TREE PROTECTION FENCE DETAIL



www.westwoodlandscape.co.uk
Chartered Landscape Architects
OXFORD GRANGE, CARLISLE GAS RD TEL: 01228 712121

Client	
Project	
Drawing No	TREE PROTECTION FENCE
Scale	1:25 @ A3
Date	01/11

APPENDIX 3

LANDSCAPE MANAGEMENT SCHEDULED TASKS



GLEESON HOMES WATERS EDGE WHITEHAVEN													LANDSCAPE MANAGEMENT SCHEDULED TASKS												28.11.20											
TASK	DATE												DATE												DATE											
	YR 1			2021			2022			YR 2			2022			YRS 3 ONWARDS			2023-			2024			2025											
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEPT	OCT	NOV	DEC
EXISTING TREES AND SHRUBS																																				
(none on site but some adjacent may be affected)																																				
Prune to maintain healthy growth																																				
Trim native hedges																																				
Check for pests and diseases- as required																																				
TREES																																				
Prune to maintain healthy growth																																				
(note prune damaged branches as required)																																				
Check for pests and diseases- as required																																				
Check stakes and ties																																				
Fertilise																																				
Water as required																																				
Plant replacements																																				
Remove stakes																																				
Selective thinning of native species from year 4																																				
SHRUBS & HEDGES																																				
Prune to maintain healthy growth																																				
(prune to maintain natural habit)																																				
Trim evergreen hedges																																				
Check for pests and diseases- as required																																				
Re-firm plants as required																																				
Check guards and canes on native shrubs																																				
Fertilise																																				
Water as required																																				
Plant replacements																																				
Apply glyphosate herbicide																																				
Hand weed																																				
Top up mulch																																				
remove guards																																				
Selective thinning of native species from year 4																																				
AMENITY GRASS																																				
Mow grass and trim edges																																				
Spring fertiliser																																				
Selective herbicide and moss killer																																				
water as required																																				
scarify and aerate as required																																				
WILDFLOWER GRASS																																				
Cut grass and trim edges																																				
Selective herbicide as required																																				
water as required																																				
LITTER/ DEBRIS COLLECTION																																				
Collect litter all areas																																				
PAVED SURFACES/ PATHS																																				
Apply glyphosate herbicide																																				

Note:
Covid 19 procedures are not accounted for here. Additional requirements to be assessed with current Government Guidelines.

LANDSCAPE IMPLEMENTATION PROGRAMME



GLEESON HOMES WATERS EDGE WHITEHAVEN 28.11.20
 LANDSCAPE IMPLEMENTATION PROGRAMME

DATE	TASK					
	Tree planting	Native hedge planting	Grass Seeding	Wildflower seeding	Grass turfing	Shrub, and ornamental hedge planting
2021						
<i>1st plot completion June 2021</i>						
JUNE						
JULY						
AUGUST						
SEPTEMBER						
OCTOBER						
NOVEMBER						
DECEMBER						
2022						
JANUARY						
FEBRUARY						
MARCH						
APRIL						
MAY						
JUNE						
JULY						
AUGUST						
SEPTEMBER						
OCTOBER						
NOVEMBER						
DECEMBER						
2023						
JANUARY						
FEBRUARY						
MARCH						
APRIL						
MAY						
JUNE						
JULY						
AUGUST						
SEPTEMBER						
OCTOBER						
NOVEMBER						
DECEMBER						

Refer to landscape Management Scheduled Tasks for maintenance operations to commence after completion of each area.