STRATA

RESIDENTIAL DEVELOPMENT

WESTGATE, CLECKHEATON

LANDSCAPE MANAGEMENT DOCUMENT

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A INTRODUCTION

This Management Plan sets out the management prescriptions to be adopted for the landscape scheme associated with the residential development and amenity areas at the site at Westgate, Cleckheaton The prescriptions cover the works to be carried out over the 5 year period relating to the planning condition with a system in place for reviewing operations at the end of the 5 years to allow the plan to be updated in accordance with site conditions and to put in place an appropriate schedule of works going forward. In the absence of a review of operations at the end of the 5 year period the plan will continue in its current form in perpetuity.

The Landscape Management Document covers works detailed in the landscape drawings below.
The following authorities will be responsible for the maintenance for other areas on the site:
Drainage Authority – Yorkshire Water
Highways – Kirklees Council
Lead Local Flood Authority – Environment Agency

A.1 Site Location

The site is located at the Strata development off Westgate, Cleckheaton, to the north east of Huddersfield.

The site is a residential development site on the edge of existing residential areas and includes:

- Existing woody vegetation
- New standard tree planting
- New native species planting
- Species rich and amenity grassland
- Wildflower meadow
- Ornamental shrubs and hedges
- Equipped play space

A.2 Documents

The management prescriptions contained in this document are for the future maintenance and management of work detailed on the following drawings:

R/2487/1U - Landscape Masterplan
R/2487/2A - Typologies
R/2487/14F - POS Details
R/2487/3 – Management Company Areas
R/2487/4- R/2563/13 – Plot Details

The Landscape Masterplan and POS drawings are appended to this document in Appendix 3. Detailed plot planting details are available on request from Strata.

A.2.1 In the preparation of this document reference has been made to the following Reports:

- *Arboricultural Assessment* by ECUS (May 2021)
- *Aboricultural Impact Assessment by* ECUS (updated Nov 2023)

A.2.2 Appendix 1 details relevant Wildlife Legislation and Appendix 2 the Operational Schedules.

A.3 Timing

This Management Plan will become operational on completion of the landscape construction works.

The operations described cover an initial 5 year period. Longer term management will need to be reviewed at the end of this period to ensure that the management objectives are being met and continued in perpetuity.

B MANAGEMENT RESPONSIBILITIES

B.1 The operations detailed within this management document are intended to instruct the appointed Landscape Contractor and subsequent Management Company to carry out the specified maintenance operations to achieve a healthy, visually attractive landscape structure to the development.

B.1.2 After a 12 month Rectification Period during which the Landscape Contractor will be liable for major failures of shrub planting as directed by the Landscape Architects, the householder will assume responsibility for the future maintenance of the planting within their own garden area.

B.1.3 The areas of amenity space will be maintained by the Landscape Contractor responsible for the original planting until the end of the Rectification Period and until such a time as it is handed over to the appointed Management Company for ongoing maintenance.

B.1.4 For ease the Management Company and the original Contractor will both be referred to as The Contractor going forward.

MANAGEMENT AIM AND OBJECTIVES

B.2 Landscape Vision

The ‘Landscape Vision’ is the term given to what it is intended will be the outcome of the management of the site. It is made up of various elements (visual, ecological and recreational) which are described separately below but which are intrinsically linked and must work in harmony in order to achieve a satisfactory outcome.

B.2.1 Visual

The site shall be managed to provide a visually attractive landscape setting for the residential development which both frames and filters views into the site and that is in keeping with the landscape character of the area.

B.2.2 Ecological

The site shall be managed to ensure that the native species shrub planting establishes well to provide a diverse wildlife habitat.
This shall underpin both what and how operations are carried out throughout the site.

The ecological objectives for the long-term management, maintenance and monitoring of the habitats comprise the requirements to:

- Maintain the new hedgerows with a bushy growth habit and ensure they remain attractive and complementary to the surrounding habitat.
- Minimise the potentially adverse environmental impacts resulting from any management operations on site including minimising the use of herbicides and pesticides.
- Ensure that pruning and trimming is ONLY undertaken outside the bird nesting season (generally accepted as being 1st March to 31st July but can be longer depending on the species) AND, where feasible, ensuring that the food value of the native vegetation is maximised by aiming to carry out any pruning or trimming in late winter (January or February) or, where ground conditions or other mitigating circumstances prevent this, then as late as possible in the Autumn in order to retain nuts and berries as winter food for the wildlife.

- Maintain and enhance the cultural and landscape value of the site by ensuring that the habitat management incorporates visual amenity benefits.

B.2.3 Recreational

The amenity areas will be managed to provide attractive and useable informal and equipped open space, to be used by the residents both locally and on the new development.

B.3 SMART Objectives

B.3.1 Private Areas

Following completion of planting in private garden areas the planting will be maintained by the Contractor until handover to the resident at the time of purchase. (B.1.2)

B.3.2 Communal Areas

Planting within amenity areas will be maintained in accordance with best practice guidelines and the specification in subsequent sections.

Existing Trees – shall be maintained in good health

New Native Shrub Planting – shall be maintained to maximise benefits for wildlife and in particular to provide a shelter for hedgehogs.

New Ornamental Planting – maintained to provide an attractive amenity landscape.

Grass – Species rich amenity grass shall be mown to achieve a varied sward. Wildflower meadow areas will be maintained to maximise the flowering period.

B.4 Best Practice Guidelines

In order to achieve these aims and objectives in a safe, environmentally responsible and sensitive manner there are a series of good practice guidelines which should be observed. Such good practice seeks to minimise the potential for negative impact on the environment and the general public. They are detailed below, in no order of ranking. Reference should also be made to the relevant legislation set out in Appendix 2.

- Ensuring that all operatives are suitably qualified, certified and competent to carry out the specific task or are supervised by such a person.
- Ensuring that all works are carried out in accordance with all relevant legislation; British and European standards; good horticultural and arboricultural practice and that the required risk assessments are undertaken and documented as necessary before carrying out works.
- Ensuring that all operations are carried out at the appropriate times of year during suitable weather and ground conditions to minimise adverse impacts on the existing vegetation and ground conditions.
- Ensuring that all tools and equipment are fit for purpose and appropriate for the particular job and site conditions. The Contractor shall allow the consultant Landscape Architect to inspect all machinery and tools intended for the Aftercare Works prior to its being brought to site if required. The use of heavy plant or machinery is to be minimised to reduce trampling of vegetation and ground compaction.
- Ensuring the safety of all members of the public during operations on site. Using interpretative signage to inform the public of operations on site where necessary and particularly where those operations are considered sensitive or may pose a danger to the public.
- Ensuring that all waste (not retained or re-used on site and including any arising in connection with the approved use of chemicals) is disposed of in accordance with the relevant Waste Management Regulations.
- Monitoring operations on site and keeping records of what was carried out, when and what observations were noted which may need immediate action or need to feed into future reviews of the management plan.

B.5 Chemical Control

When chemical compounds/herbicides are to be used, the Contractor shall ensure that all operatives have read and follow carefully the instructions on the manufacturer's label.

The Contractor shall also consult the 'Recommendation for Safe Use of Chemical Compounds Used in Agriculture and Food Storage' published by DEFRA, Fisheries and Food: Safety Pesticides and Infestation Control Division, London SW1, and implement recommendations as necessary.

The Contractor shall submit the name of the chemical compound/herbicide, its supplier, a breakdown of its constituents, the mode and recommended rate of application and any species susceptibility for the Landscape Architect's consideration. Approval by the Landscape Architect for the use of a particular chemical compound/herbicide shall, in no way, relieve the Contractor of his contractual obligations.

All chemical compounds/herbicides used shall be kept safe at all times on site. Empty containers must be removed from site and disposed of safely.

B.6 Control of Invasive Species

Whilst no invasive species are currently present on site, the following guidelines should be followed if any invasive or injurious plants are identified on site in the future.

If any *invasive* or *injurious plants* are identified on site, the appropriate method of control shall be implemented, in accordance with relevant best practice and the Environment Agency recommendations.

The Wildlife & Countryside Act 1981 places a legal responsibility on land owners / land managers to control any *invasive, non-native plant* and *animal species* which have been identified as having 'the ability to spread causing damage to the environment, the economy, health or the way we live'. This responsibility also extends to native plants which are deemed to cause a problem to farming productivity. These are termed *injurious weeds*.

The list of plant and animal species which have been identified is listed in Schedule 9 of the ACT.

The legal duty placed on land owners does not oblige the land owner to remove or treat the invasive or injurious species but requires that the land owner does not:

- Allow invasive plants to spread onto adjacent land – the owner of that land has the right to take legal action if this occurs
- Plant or encourage the spread of invasive plants outside your property – this can include moving contaminated soil from one place to another or incorrectly handling and transporting contaminated material and cuttings

C MANAGEMENT OPERATIONS

The site shall be visited at the appropriate times of year and for a sufficient number of times to ensure that the operations set out below are carried out with the desired outcome stated.

NOTE: All pruning and hedge trimming shall take place during September-November, outside nesting season, to prevent the disturbance of nesting birds. In addition, vegetation clearance generally shall be carried out carefully and prior to removal shall be checked for harbouring animals.

C.1.0 STANDARD TREES

C.1.1 The Contractor shall maintain an area of 1000 mm in diameter weed-free around each staked tree. Strimmers shall not be used for weed control around trees planted into grass without the protection of a strimmer guard. Ther shall be no mowing or chemical spraying within 1m of the trunks.

Where approved chemical compounds/herbicides are used, the Contractor shall remove and dispose of off-site, dead surface matter following application and dieback of weed growth within fourteen (14) days, or as directed by the Landscape Architect.

C.1.2 The trees shall be maintained at all times and the Contractor shall check all stakes and ties regularly. Adjustment to conform to stem growth and to prevent chaffing and renewal of stakes or ties shall be allowed for in the Contractor's rates (excluding vandalism).

C.1.3 The Contractor will inspect and ensure that trees remain firm and well secured after frost heave, strong winds and other ground disturbance. 'Collars' at the base of the trunks created by tree movement shall be broken up by forking and backfilling with topsoil as necessary and re-firmed.

C.1.4 The Contractor shall apply a slow release fertiliser to the base of each standard tree. For the first 3 years, in March/April of each year, fertiliser shall be planted at the following rates:

a) Semi-mature standards……..300gms/Tree
a) Extra Heavy Standards, Heavy Standards, Selected Standards & Standards ..... 200 gms/Tree
b) Light Standards & Feathered Trees ..... 100 gms/Tree
c) Specimen Plants, Transplants & Shrubs (in pits) ..... 50 gms/Plant
d) Plants in Shrub Beds & Hedgelines ..... 25 gms/Plant

C.1.5 The Contractor shall prune all dead or damaged branches in accordance with 6.0. Some wood resulting from these prunings can be left in small piles in areas beneath existing and establishing native hedgerows.

C.1.6 Watering shall be carried out as specified under watering section 9.0.

C.1.7 All failures shall be replaced annually in accordance with clause 10.0.

C.1.8 Trees positioned in shrub beds shall have their tree pits maintained as for shrub beds, as specified in clause 2.

C.1.9 For trees positioned in ornamental lawn areas where tree pits have been re-turfed or seeded, Aftercare Work shall be as specified in grass maintenance/mowing.

C.1.10 Trees and guards shall be inspected at the end of Year 3 and where trees have established sufficiently well, they shall be removed. Where trees are still considered to need support, stakes shall be left in place and re-inspected at the end of Year 4. Ideally all stakes shall be removed by the end of Year 5 so that trees develop sufficiently robust stems and root systems and do no rely on support.

C.2.0 ORNAMENTAL SHRUB PLANTING

Maintenance of Shrub Beds

C.2.1 Shrub beds, including staked trees and specimen plants, shall be kept free from weed or grass. Forking or hoeing shall be carried out to remove noxious annual and perennial weed roots entirely from the shrub bed before the formation of seed heads. Removal of weed foliage only shall not be permitted.

All weed material resulting from the operation described above shall be collected from the shrub beds and removed from site by the Contractor.

C.2.2 Where herbaceous material or bulbs are incorporated into shrub beds the use of chemical compounds/herbicides shall not be permitted and the Contractor shall allow in his rates for hand cultivations only.

C.2.3 Following frosty weather and strong winds, the Contractor shall inspect shrub beds and firm any plant that has been loosened.

C.2.4 The Contractor shall apply a slow release fertiliser (eg Enmag or similar approved) over each shrub bed at a rate of 25 gms/shrub once a year in Spring (March/April).

C.2.5 Shrubs shall be pruned once annually to remove all deadwood, broken or damaged or crossing branches as specified in clause 6.0. Shrubs shall be pruned where appropriate during Years 1-3 to promote bushiness.

All arisings shall be carted off-site.

C.2.6 The Contractor shall replace all failures in accordance with clause 10.0.

C.3 NEW ORNAMENTAL HEDGES

Maintenance of Hedges

C.3.1 Areas beneath hedgerows shall be kept free from weed growth. Hand weeding shall be carried out to remove noxious annual and/or perennial weed roots before the formation of seed heads. Bark mulch layer shall be kept topped up to 50mm depth.

All weed material resulting from the operation described above shall be collected and removed from site.

C.3.2 Following frosty weather and strong winds, the hedgerow shall be inspected and any plant that has been loosened shall be firmed in.

C.3.3 A slow release fertiliser (eg Enmag or similar approved) shall be applied over each shrub bed at a rate of 25 gms/shrub once a year for the first three (3) years after planting in Spring (March/April).

C.3.4 Hedges shall be pruned to ultimately achieve a healthy, dense, bushy hedgerow between 1 & 1.5 metres in height and between 400 & 500mm in width.

- Beech hedges should be lightly pruned in winter and mid-summer over the first few years until the desired height and width is achieved. When the hedge has reached its desired height clipping should be carried out in summer aiming to clip once in early June to maintain the bushiness of the hedge and again in early August. This later clipping produces a late flush of leaves which will stay on the branches over winter.

- Escallonia and Prunus hedges should be pruned once a year in autumn after flowering has finished as the flowers form on the old wood of previous years growth. Any straggling, dead or damaged growth should also be removed.

All arisings shall be carted off-site

All failures shall be replaced in accordance with section C.10.

C.4 NEW NATIVE SPECIES TREE AND SHRUB PLANTING

General Maintenance Years 1-4

C.4.1 An area of 300 mm diameter around each transplant shall be kept free from weed growth. All invasive herbaceous scrubby vegetation, (eg Bramble & Nettles) and non-native or highly invasive tree species shall be cleared and removed from site four (4) times annually.

C.4.2 Transplants shall be firmed in as necessary at each maintenance visit and particularly in Year 1 after planting after cold and frosty conditions before roots have taken hold.

C.4.3 Replace all failures in Year 1 in accordance with Section 10.

In Years 2-4 replace all failures as required to produce a uniformly vegetated hedge line.

C.4.4 Remove all litter/fly tipping at each maintenance visit

C.4.5 Top up mulch annually in Spring to restrict competition from grasses and herbs during Years 1-4 (See Section 8) to the original depth.

General Maintenance Up to Year 5

C.4.6 Generally aim to maintain vegetation groups at a height of between 1.0 and 2.0 metres. Prune in Year 5 to establish the desired height and density of the shrubs. Prune outside the bird nesting season (1st March to 31st July) and aim to cut in January or February or, where ground conditions or other mitigating circumstances prevent this, then as late as possible in the Autumn. Avoid winter cutting in order to retain nuts and berries as winter food for wildlife.

C.4.7 Remove any non-native or competitive plants from the ground layer by hand pulling to avoid disturbance to surrounding ground and plant life and dispose of arisings off site.

C.4.8 Assess the need for planting to either replace defective or failed plant material or gap up as necessary.

C.4.9 Remove all litter/fly tipping at each maintenance visit.

C.4.10 Assess the need for top up mulch depending on the establishment of the vegetation and the desire to provide conditions suitable for development of a herbaceous ground layer.

General Maintenance from Year 5

C.4.11 From year 5 onwards native species woodland and woodland edge planting will be managed to provide a healthy woodland and woodland edge with clearings opening up the floor to light and a graduated edge to the adjacent meadow areas.

C.5.0 NEW NATIVE SPECIES HEDGE PLANTING

General Maintenance Years 1-4

5.1 An area of 300 mm diameter around each transplant shall be kept free from weed growth. All invasive herbaceous scrubby vegetation, (eg Bramble & Nettles) and non-native or highly invasive tree species, shall be cleared and removed from site four (4) times annually.

5.2 Transplants shall be firmed in as necessary at each maintenance visit and particularly in Year 1 after planting after cold and frosty conditions before roots have taken hold.

5.3 Prune hedgerows to 450 mm in Year 2 to encourage bushiness. In Year 4 trim sides and top to begin formative pruning into an A shaped, dense hedge with a maximum height of 2 metres.
Prune only out of the bird nesting season (1st March to 31st July).

5.4 Ensure all standard trees planted within the hedge are suitably protected and remain undamaged.

5.5 Replace all failures in Year 1 in accordance with Section 10.

In Years 2-4 replace all failures as required to produce a uniformly vegetated hedge line.

5.6 Remove all litter/fly tipping at each maintenance visit

5.7 Top up mulch annually in Spring to restrict competition from grasses and herbs during Years 1-4 (See Section 8) to the original depth.

5.8 Do not apply fertilisers to the hedgeline or use fertilisers, manure or pesticides within 2 metres of the centre line of the hedge to prevent leaching and the growth of undesirable, competitive ruderal weeds.

General Maintenance Year 5

5.9 Generally aim to maintain hedges at a height of not less than 1.8 metres. Prune in Year 5 to establish the desired height and width and maintain the A shape and density of the hedges. Prune outside the bird nesting season (1st March to 31st July) and aim to cut in January or February or, where ground conditions or other mitigating circumstances prevent this, then as late as possible in the Autumn. Avoid winter cutting in order to retain nuts and berries as winter food for the wildlife.
After Year 5 a cyclical approach to hedge maintenance shall be adopted as described under *clause 7.5*.

5.10 Remove any non-native or competitive plants from the ground layer by hand pulling to avoid disturbance to surrounding ground and plant life and dispose of arisings off site.

5.11 Do not apply fertilisers to the hedge line or use fertilisers, manure or pesticides within 2 metres of the centre line of the hedge to prevent leaching and the growth of undesirable, competitive ruderal weeds.

5.12 Assess the need for planting to either replace defective or failed plant material or gap up as necessary to produce a consistently uniform hedge line.

5.13 Remove all litter/fly tipping at each maintenance visit.

5.14 Assess the need for top up mulch depending on the establishment of the hedge and the desire to provide conditions suitable for development of a herbaceous ground layer.

C.6 EXISTING WOODY VEGETATION

C.6.1 All existing trees & hedgerows within and on the boundaries of the site shall be maintained in a safe condition and as a valuable wildlife resource..

C.6.2 This will be done with the minimal of intervention.

C.6.3 The trees shall be inspected on an annual basis by a suitably qualified Arboriculturist and any recommendations for tree work shall be undertaken as required all in accordance with British Standards.

C.6.4 Any vegetation which is damaged or failing to thrive and which constitutes either a health and safety risk or which is visually detrimental in the situation shall be removed. If this involves an off-site tree then the neighbouring land owner must be informed

C.6.5 Existing hedges within rear gardens shall be maintained by the Occupier following handover.

C.7.0 PRUNING

C.7.1 All pruning work, whether on newly planted material or existing vegetation, shall be carried out in accordance with BS 3998 where applicable. Resultant wounds shall be treated with approved fungicidal sealant.

C.7.2 All pruning of trees shall be carried out between November and March inclusive unless otherwise directed in the notes below. The following operations shall be carried out:

a) All diseased tissues and any dieback shall be pruned to the nearest bud with clean wood.
b) The removal of unsightly 'water shoots' and epicormic growth from standard, selected standard, heavy standard and extra heavy standard trees.

C.7.3 Broken and vandalised branches shall be cut back to the next joint, removing splinter wood, and treated with an approved sealant. If the tree, in the opinion of the Landscape Architect is beyond pruning, it shall be removed by the Contractor, and the ground made good.

C.7.4 Newly planted shrubs shall only be pruned as required by the Landscape Architect. At the end of the growing season the shrubs shall be checked and all deadwood, broken or damaged or crossing branches shall be cut out.

C.7.5 Pruning of existing well established shrub material shall be carried out where indicated on the Contract Drawings and shall conform to the following:

a) Shrubs flowering in Winter shall be pruned in March subject to confirmation that there are no active birds' nests in the vegetation.
b) Shrubs flowering in March to July shall be pruned immediately after flowering subject to confirmation that there are no nesting birds in the vegetation.
c) Shrubs flowering July to September shall be cut back to old wood in January to February.
d) Rose bushes other than Species Roses shall be pruned in February to encourage basal growths and keep plants in a balanced and compact habit.
e) Pruning and removal of branches shall be carried out using sharp, clean implements to give a clean cut with one flat face. Any cuts or wounds over 20 mm in diameter are to be painted with an approved sealant.
f) The Contractor shall cut newly planted or existing hedges as indicated on the Contract Drawings and in the Schedule of Quantity. Cutting will be such as to encourage a stable shape and remove current growth rather than old wood.
g) All arisings from pruning work shall be removed from site to Contractor's own tip.

C.8.0 MULCHING

C.8.1 The mulch to all ornamental shrub beds shall be topped up in the first Spring after planting after the completion of the early Spring maintenance visit (ie March/April) to achieve an overall depth of 50 mm.

C.8.2 Trees planted into grass shall have a 1m diameter mulched circle to base clear of turf. This shall be topped up regularly for a period of 3 years.

C.9 WATERING

C.9.1 New planting shall be watered regularly for the first three (3) years during April, May, June, July and August and should comply with *BS8545:2014 Trees from Nursery to Independence*.

C.9.2 The following rates are given as a guideline for the volume of water required per visit:

Plant Type	Water Quantity
Trees	50 litres per tree
Specimen Plants	15 litres per plant
Transplants, Shrubs, Hedging and Herbaceous Material	10 litres per plant

(NB 4.5 litres = Approximately 1 gallon)

New trees shall be watered weekly for the first year and fortnightly during Year 2.

From Year 3 onwards watering shall be carried out during periods of dry weather when the temperature ≤25°C for a period of 10 days.

C.9.3 The Landscape Contractor or Management Company shall allow for bringing to site sufficient water carts, hoses or sprinklers to provide adequate water to fulfil the above Specification and shall also be responsible for paying all charges in connection with the supply of water required unless otherwise instructed in writing by the Client or consultant Landscape Architect.

C.10.0 FAILURE OF PLANT MATERIAL

C.10.1 The Contractor shall replace, at his own expense, any tree, transplant, specimen plant, shrub or herbaceous material which has died or has not developed full foliage throughout its branches during the twelve (12) months following planting. Replacements shall take place as early as possible during the planting season following the original planting period.

C.10.2 The Contractor shall subsequently make good any further failures during the following twelve (12) months if the Aftercare period is two (2) years.

C.10.3 Replacement plant material required as a result of vandalism shall be identified separately and provided by the Contractor at the rates indicated in the Schedule of Rates (if provided) or as agreed in writing between the Contractor and the Landscape Architect.

C.10.4 All replacement plant material shall conform to the original Specification unless otherwise agreed in writing between the Contractor and the Landscape Architect.

C.10.5 The Contractor shall make good at his own expense all necessary repairs to levels, grassed areas and paving required because of plant replacements.

C.11.0 GRASSED AREAS

C.11.1 Short Mown Lawns

Grassed areas shall be mown as indicated on the Contract Drawings and in the Schedule of Quantity. Litter shall be collected prior to each cut. The disposal of grass cuttings by the chosen machine shall not result in cut grass being left in rows; rather the mowers shall reduce the cuttings to fine particles to be spread around to decompose rapidly. Works around newly planted trees shall be carried out by hand-tool rather than mechanically.

The Contractor should note that mowing includes for cutting the grass, trimming grass edges, trimming around the base of trees, manholes, street lights, signposts, up to the edges of paving, fencing and other boundaries etc to keep the total area in a neat and tidy condition at all times.

Short amenity grass shall be maintained at a height between 25 and 65mm.

In drought conditions mowing operations shall continue only so long as grass growth continues to reach maximum allowable height. In very wet conditions all operations shall cease until conditions allow operations to continue without either damaging the surface levels and contours of the grassed areas or leaving divots from mowing machines. Alterations required to the Aftercare Programme due to special weather conditions shall be agreed with the Landscape Architect in writing.

C.11.2 Species Rich Grass

To be successful, initial maintenance on species rich grass areas must be carefully managed to ensure successful establishment conditions without being outcompeted by the stronger grasses and weeds.
Seeded areas shall be maintained as follows:
Year 1 – To be mown fortnightly during the first growing season in order to exclude weed growth. Sward should be cut to a height of 40-60mm and all arisings removed from site.
Year 2 onwards – Mow regularly from April-June maintaining a height of 25-40mm. Mowing can be relaxed from Jume – August to allow flowering species to flower and set seed.

C.11.2 Wildflower Meadow Areas

To be successful, initial maintenance on wildflower grass areas must be carefully managed to ensure the creation of suitable conditions for the wildflower seeds to establish without being outcompeted by the grass nurse crop. The following cutting regime is a guideline and the actual cutting programme adopted will dependant on the growth in each situation, this in turn being directly by soil fertility, rainfall and ground temperature. The cutting regime will differ, depending on whether the sward is established in Autumn or Spring.

C.11.3 *Spring Establishment:*

Year 1

1st cut to 4-7 cm approx 6 weeks after sowing if sufficient material has established

2nd cut to 4-7 cm approx in May (when sward height exceeds 10 cm)

3rd cut to 4-7 cm in September/October

All arisings to be removed from site.

Year 2 (where cutting is carried out)

1st cut to 4-7 cm March/April

Final cut to 4-7 cm end September/October.

All arisings to be removed from site.

C.11.4 *Autumn Establishment:*

Year 1

1st cut to 4-7 cm in March (if sufficient material)

2nd cut to 4-7 cm in early May

3rd cut to 4 cm in September

All arisings to be removed from site.

Year 2 (where cutting is carried out)

1st cut to 4-7 cm March/April

Final cut to 4-7 cm end September/October.

Years 2/3 to 5

Subsequent maintenance of wildflower grass areas shall be undertaken to manage grass at different heights to create a diversity of habitats which will enable the colonisation of a range of plant, bird, small mammal, invertebrate and insect life. Alterations to the cutting regime will ultimately be dependent on the sward composition and how the various areas are establishing and being used and will include:

Cutting in Autumn (end September/October) once grasses and flora have seeded. Removing all arisings from any grass maintenance operations from the grass surface and ensuring that clippings / grassy material do not enter the pond or the overflow channel. Leaving small piles of grass clippings no more than 1500mm x 1500mm² x 300mm deep maximum on site in suitable locations within the grass areas to provide suitable habitat for insects and reptiles.

C.11.3 **Fertiliser**

Apply a fertiliser to the grass areas annually. The fertiliser shall be a compound granular free flowing material and shall supply the ratio of plant nutrients N:P:K at 2:1:1 for Spring Dressings and N:P:K at 1:1:1½ for Autumn Dressings. They shall be spread at a rate of 35gms/m^2. No fertiliser with the insoluble phosphate representing more than 10% of the total phosphate will be acceptable.

C.11.4 **Weedkiller**

The Contractor shall supply and apply a suitable selective herbicide to lawned areas, to be applied only on the written instruction of the Landscape Architect. The herbicide shall be approved by the Landscape Architect and applied at the rate and in accordance with the manufacturer's instructions. The Contractor shall only spray during calm conditions, when rain is not imminent and not during drought conditions. Three days shall elapse before recommencement of mowing operations.

C.11.5 **Remedials**

The Contractor shall be responsible for remedial works on grassed areas within the Contract boundary, disturbed by cultivations, planting or other operations carried out by the Contractor in the execution of the Works.

In Spring and Autumn, or otherwise as instructed by the Landscape Architect, the Contractor shall re-seed any areas which fail to germinate, with approved grass seed mix. Topsoil shall be cultivated and aerated by forking as necessary to tie in with adjacent levels to promote good sward establishment.

Returfing of damaged or bare areas identified by the Landscape Architect shall comply with all good horticultural practice. The Contractor shall remove or make up all areas to a level sufficient to take replacement turves. The base of the area will be lightly broken up and levelled prior to final placement of the turf.

C.12.0 PUBLIC OPEN SPACES AND PLAY AREA

C.12.1 Fencing and Gates

Inspect all fences, railings and gates for any necessary repair, on each maintenance visit.

C.12.2 Street Furniture

Inspect all seats and litter bins for defects / damage. Report any defect or damage to Client and seek approval for repair / replacement as required.

C.12.3 Footpaths/Paved Areas

Where indicated in Schedules of Quantity, footpaths and paved areas shall be treated with a total weed killer in accordance with the manufacturer's instructions. The chemical compound/herbicide shall be approved by the Landscape Architect and of an appropriate type for the conditions on site and applied in April-June.

C.12.4 Litter

Litter shall be collected and carted off site during each maintenance visit.

C.12.5 Planting

Planting beds within the POS areas shall be assessed once the have been in use for 6 months. Any areas of planting that are shown to be vulnerable are to be replaced with more robust species or removed all together and replaced with grass or hard surfacing as appropriate.

At the end of the initial 12 month maintenance / defects liability period, the Play Area / equipment and safety surfacing shall have been inspected by an independent specialist, approved by the Local Authority and appointed by Avant Homes, to ensure it complies with NPFA and RoSPA guidelines as required, prior to handover to the Management Company.

C.12.6 Play Equipment

Play equipment shall be inspected when required in accordance with RoSPA guidelines by suitably qualified playground inspectors.

Any items found to be broken or defective shall be removed and replaced or repaired immediately. Items found to be dangerous shall be inactivated until a repair or replacement can be made.

The Play Area/equipment shall be inspected annually by an independent specialist to ensure the long term safety of the site, equipment and ancillary items. This will also meet legal and insurance responsibilities as well as complying with the requirements of EN 1176 (European Playground Standard).

C.12.7 **Grasscrete Access Track**

The access track to the Attenuation Tank is to be surfaced with grasscrete in accordance with engineering drawing QD1776-10-E Tanker Access.

The track surfacing will be seeded with grass to match the rest of the open space sward. The track shall be inspected at each visit for damage and any damage rectified immediately.

D REASSESSMENT OF SCHEDULES OF WORKS

D.1 An annual walkover assessment will be made by the Client and Management Company in conjunction with a qualified Arboriculturist and Landscape Architect as required. Any recommendations shall be carried out within three (3) months of the report, unless any trees are identified as potentially dangerous and in need of urgent attention. In this instance, works shall be carried out Immediately.

D.2 Re-assess the need for adjustment of the operational schedules annually following the annual walkover and undertake to amend the document as required.

D.3 At the end of the first 5 year period the management operations will be reviewed and assessed by all parties for their appropriateness and revised as necessary to provide an effective plan going forward in perpetuity.

APPENDIX 1:
Relevant Wildlife Legislation

Breeding Birds

All wild birds are protected under the ***Wildlife & Countryside Act 1981*** (as amended) during the breeding season (which is normally assumed to be from the 1st March to 31st July).

Bat species

All British bat species and their roosts are legally protected under the ***Wildlife & Countryside Act 1981*** (as amended), through inclusion in Schedule 5 and under the ***Conservation of Habitats and Species Regulations 2010*** which implements the EC Directive 92/43/EEC in the UK. Under the legislation, it is an offence to intentionally kill, injure or capture bats, deliberately disturb bats and damage, destroy or obstruct access to bat roosts. Since the introduction of the ***Countryside and Rights of Way (CROW) Act*** in ***2000*** it is also an offence to recklessly harm or disturb bats in their roosting places.

Reptile species

The four common reptile species (Common Lizard, Grass Snake, Adder and Slow-worm) are listed under Schedule 5 of the ***Wildlife & Countryside Act 1981*** (as amended), in respect of Section 9(5) and part 9(1). This protection was extended by the Countryside and Rights of Way (CROW) Act 2000. This legislation makes it an offence to:

Intentionally or recklessly, kill or injure any of the above species and / or;
Sell, or attempt to sell, any part of the species, alive or dead.

The Sand Lizard and Smooth Snake receive greater protection under both the ***Wildlife & Countryside Act 1981*** (as amended) and from the Conservation of Habitats and Species Regulations 2010 which gives them full protection under Regulation 39.

The legislation protects these species from:

deliberately or intentionally killing and capturing (taking) or intentional injuring;
deliberately disturbing;
deliberately taking or destroying eggs;
damaging or destroying a breeding site or resting place, or intentionally damaging a place used for shelter and protection;
intentionally obstructing access to a place used for shelter; and
keeping, transporting, selling or exchanging; offering for sale or advertising.

Water Vole

Since April 2008 the Water Vole has received full protection under Section 9 of the ***Wildlife & Countryside Act 1981*** (as amended). Legal protection makes it an offence to:-

intentionally kill, injure or take (capture) a water vole;
possess or control a live or dead water vole or any part of a water vole;
intentionally or recklessly damage, destroy or obstruct access to any structure or place which water voles use for shelter or protection or disturb a water vole while they are using such a place;
sell, offer for sale or advertise for live or dead water voles.

RELEVANT HEALTH & SAFETY LEGISLATION

Health & Safety at Work Act 1974 (and amendments)
HSE's Managing Health and Safety in Forestry

RELEVANT PESTICIDES, BIOLOGICAL CONTROL AGENTS LEGISLATION

Control of Pesticides Regulations 1986 (COPR), as amended by the Control of Pesticides (amended) Regulations 1997 (COP(A)R)
Control of Substances Hazardous to Health 2002 (COSHH)
Waste Management (Duty of Care) Regulations 2002
Waste Management Regulations 1996
Waste Management Licensing Regulations 1994 (plus carious amendments)
Environment Protection Act 1990

APPENDIX 2:
Operational Schedules

Operation	Year					Proposed Frequency	Restrictions
	1	2	3	4	5		
Standard Trees - Section C.1.0							
Maintain tree pits weed free	✓	✓	✓	✓	✓	6 visits per year	Avoid the use of chemicals in sensitive / nature conservation areas
Fertilise trees	✓	✓	✓			Once annually	In March or April
Water trees	✓	✓	✓			Weekly / as required	April to September and weekly during prolonged dry weather (See Section 9.0)
Check firmness of trees in tree pits and re-firm as required	✓	✓	✓	✓	✓	At each visit	Carry out additional checks after exceptionally windy or frosty weather during early establishment years (Year 1-2)
Prune damaged branches	✓	✓	✓	✓	✓	As required	Prune as soon as identified
Check tree stakes & ties & repair / replace	✓	✓	✓	✓	✓	Every 3 months in perpetuity	Replace with materials to existing specification and replace as soon as identified
Check establishment of trees and remove stakes as required	✓	✓	✓	✓	✓	As required. Aim to remove all stakes by end of initial 5 year period	
Replace defective & failed trees	✓	✓	✓	✓	✓	Once annually in planting season	In nearest available planting season, replacing all failures in Year 1 (the first year planting) and thereafter as agreed at the annual walkover (See Section D)
Top up mulch to tree pits in grassed areas	✓	✓	✓	✓	✓	Once annually in perpetuity	In March or April

Litter pick and remove all arisings	✓	✓	✓	✓	✓	At each visit in perpetuity	Dispose of to tip in accordance with relevant Waste Management Regulations

Ornamental Shrub Beds and Ornamental hedges - Section C.2.0 and C3.0							
Maintain shrub beds weed free	✓	✓	✓	✓	✓	6 visits per year in perpetuity	Avoid the use of chemicals in areas containing herbaceous plant material or bulbs
Apply slow release fertiliser	✓	✓	✓	✓	✓	Once annually	In March or April
Check firmness of shrubs in shrub bed and re-firm as required	✓	✓	✓	✓	✓	At each visit	Carry out additional checks after exceptionally windy or frosty weather during early establishment years (Year 1-2)
Water as required	✓	✓	✓			Weekly / as required	April to September and weekly during prolonged dry weather (See Section 7.0)
Prune damaged shrubs/ hedgelines	✓	✓	✓	✓	✓	As required	Prune as soon as identified and at appropriate times of year for hedges
Replace defective & failed plant material	✓	✓	✓	✓	✓	Once annually in planting season	Varied responsibility and replacement requirements dependant on Year of replacement & area (See Section10.0)
Top up mulch	✓	✓	✓	✓	✓	Once annually in perpetuity	In March or April
Litter pick / remove flytipping and remove all arisings	✓	✓	✓	✓	✓	At each visit in perpetuity	Check for harbouring wildlife

New Native Planting and Hedges - Section C.4.0 and Section C5.0							
Maintain 300mm diameter area around each plant weed free and remove undesirable herbaceous or woody species	✓	✓	✓	✓	✓	Four times annually	Avoid the use of chemicals in areas within the catchment area of water bodies

Control the spread of any invasive or undesirable weed	✓	✓	✓	✓	✓	As required in perpetuity	Before flowering / seeding and in accordance with specific requirements for the particular weed species
Check firmness of plant material in ground and re-firm as required	✓	✓	✓	✓	✓	At each visit	Carry out additional checks after exceptionally windy or frosty weather during early establishment years (Year 1-2)
Continue pruning to achieve desired height and width	✓	✓	✓	✓	✓	Once annually in perpetuity	Out of bird nesting season
Water as required	✓	✓	✓			Weekly / as required	April to September and weekly during prolonged dry weather (See Section 9.0)
Replace defective & failed plant material	✓	✓	✓	✓	✓	Once annually in planting season	In nearest available planting season, replacing all failures in Year 1 (the first year planting) and thereafter as agreed at the annual walkover (See Section D)
Top up mulch	✓	✓	✓	✓	✓	Once annually	In March or April
Litter pick / remove flytipping and remove all arisings	✓	✓	✓	✓	✓	At each visit in perpetuity	Check for harbouring wildlife and dispose of arisings to tip in accordance with relevant Waste Management Regulations

Existing Woody Vegetation – Section C.6							
Carry out recommendations made by Arboriculturist at annual walkover	✓	✓	✓	✓	✓	As required / agreed in perpetuity	Out of bird nesting season
Identify suitable species of naturally regenerating plant material and allow to develop	✓	✓	✓	✓	✓	As required	Tag as necessary to identify
Coppice any native vegetation as required	✓				✓		Out of bird nesting season

Remove any failing / dead material for Health & Safety or visual reasons (otherwise leave in situ)	✓	✓	✓	✓	✓	As required	Out of bird nesting season
Remove any non-native or undesirable native species	✓	✓	✓	✓	✓	As required	Out of bird nesting season
Carry out initial management to existing boundary hedgerows	✓						
Carry out ongoing annual trimming of existing hedgerows until handover to occupant	✓	✓	✓	✓	✓	Until house is occupied	
Litter pick / remove flytipping and remove all arisings	✓	✓	✓	✓	✓	At each visit in perpetuity	Check for harbouring wildlife and dispose of arisings to tip in accordance with relevant Waste Management Regulations

Grass Areas – Section C.11.0							
Maintain lawns	✓	✓	✓	✓	✓	As required between height tolerances until handover to householders	
Maintain species rich grass areas during the early establishment period	✓	✓	✓	✓	✓	Up to 3 times for newly established areas in Year 1. Twice in Year 2 and future years (as specified)	Remove arisings
Maintain species rich grass areas after establishment	✓	✓	✓	✓	✓	As specified	Remove arisings
Maintain wildflower grass areas during the early establishment period	✓	✓				Up to 3 times for newly established areas in Year 1. Twice in Year 2 (as specified)	Remove arisings
Maintain wildflower meadow areas			✓	✓	✓	Once annually Sept/October in perpetuity	Remove arisings
Apply selective herbicide to amenity areas	✓	✓	✓	✓	✓	Once annually in perpetuity	As required
Reinstate any damaged areas of amenity grass as	✓	✓	✓	✓	✓	Annually in season in perpetuity	

required by re-seeding or re-turfing							

Amenity Areas – Section C.12.0							
Check fences and gates for damage	✓	✓	✓	✓	✓	On each visit in perpetuity	
Collect all litter and remove from site	✓	✓	✓	✓	✓	On each visit in perpetuity	
Inspect Play Area for damage	✓	✓	✓	✓	✓	As specified on each visit	Carry out any repairs or replacement as necessary
Inspect grasscrete access track for damage	✓	✓	✓	✓	✓	At each visit	Carry out repairs as necessary

Management Plan Review – Section D							
Carry out annual walkover	✓	✓	✓	✓	✓		Act on recommendations for works as required and adjust the operational schedules where required.
Undertake necessary survey work with specialist consultants, review this document and prepare new plan as required					✓	Once	Consultation with Client, consultant Landscape Architect, Ecologist, Arboriculturist and Management Company

APPENDIX 3:

R/2487/1U Landscape Masterplan
R/2487/14F POS Planting

KEY

- Existing trees, hedges and vegetation to be retained.
- Existing trees, hedges and vegetation to be removed.
- Proposed Extra heavy standard (14-16cm girth) tree
- Proposed Extra heavy standard (14-16cm girth) tree planted into verge with rootbarrier around the edge of the verge
- Proposed heavy standard (12-14cm girth) tree
- Proposed selected standard (10-12cm girth) tree
- Proposed Beech hedging
  Proposed evergreen flowering hedge (Escallonia)
- Proposed native hedge
- Proposed mixed native species shrub planting
- Proposed mixed native species tree & shrub planting
- Proposed ornamental shrub planting
- Proposed turf
- Rear gardens
- Proposed amenity grass seed
- Proposed wildflower grass seed for wet soils
- Proposed wildflower grass seed for basin banking
- Species rich grassland
- Mixed scrub
- Grasscrete to engineer's design
- Proposed 1800mm high acoustic fencing (detailed by others)
- Proposed 1800mm high timber close boarded fence (detailed by others)
- Proposed 1800mm high timber close boarded acoustic fence with concrete posts (detailed by others)
- Proposed 600mm high timber trip rail (detailed by others)
- Proposed 1800mm high screen walls (detailed by others)
- Proposed 900mm high stone walls (detailed by others)
- Proposed hedgehog foraging hole - refer to ecology report for further details

NOTES

PROTECTION OF EXISTING VEGETATION

Existing vegetation to be retained on site shall be protected where necessary during works by a tree protective barrier, secured to a scaffold tubing framework with fluorescent tape to the top rail. Protective fencing shall be erected on the canopy drip line wherever possible. Laminated, waterproof A4 signs shall be fixed to the fence posts at 10m intervals bearing the words 'PROTECTED TREE ZONE - NO STORAGE OR OPERATIONS WITHIN FENCED AREA'.

Tracking of machinery, storage of chemicals and building materials shall not be permitted within the protected area. Leaks or spills should be removed immediately and the contaminated soil replaced. No bonfires shall be lit within 5m of the canopy spread. Any excavation work beneath the canopy spread shall be carried out by hand.
All works affecting trees within the development shall be subject to BS 5837:2012.

PROTECTED TREES

Sixteen trees (T004 to T019) are protected by Kirklees Tree Preservation Order ref. No. 57 dated. However at the time of survey it was noted that these previously pollarded trees have not been managed for some time and are in very poor condition. The removal of these trees should not be prevented under the TPO due to their condition.

Any work to TPO trees is enforced under the Town and Country Planning (Tree Preservation) (England). Regulations 2012. A Tree Preservation Order is an order made by a local planning authority in England to protect specific trees, groups of trees or woodlands in the interests of amenity. An Order prohibits the:

- cutting down
- topping
- lopping
- uprooting
- wilful damage
- wilful destruction

of trees without the local planning authority's written consent. If consent is given, it can be subject to conditions which have to be followed. In the Secretary of State's view, cutting roots is also a prohibited activity and requires the authority's consent.

TREE PLANTING

Tree planting to the front gardens of selected plots will break up the hard lines of the buildings and create focal points within the development. The tree species selected will maximise food and nectar sources for birds and invertebrates. Trees will be planted as Select and Heavy Standards to provide a reasonable degree of instant maturity to the development. Foundation design of new buildings shall accommodate proposed tree planting in accordance with NHBC guidelines.

Suggested species:

Acer campestre (Ac)
Acer campestre 'Elsrijk' (AcE)
Acer platanoides 'Laciniatum' (ApL)
Alnus glutinosa (Ag)
Betula nigra (Bn)
Betula pendula (Bp)
Betula pubescens (Bpu)
Betula utilis var. jacquemontii (Buj)
Carpinus betulus (Cb)
Malus Rudolf (MR)
Malus tschonoskii (Mt)
Prunus cerasifera 'Nigra' (PcN)
Prunus subhirtella 'Autumnalis Rosea' (PsAR)
Pyrus calleryana 'Chanticleer' (PcC)
Quercus robur (Qr)
Salix alba (Sal)
Salix fragilis (Sf)
Sorbus aria (Sa)
Sorbus aucuparia (Sau)
Sorbus 'Embley' (SE)
Sorbus 'Joseph Rock' (SJR)
Tilia cordata 'Green Spire' (TcGS)

SHRUB PLANTING

A mix of evergreen and deciduous shrubs will be planted in selected front gardens to soften the development and to provide a valuable food source for birds and invertebrates. A mix of medium/low shrubs will be planted to shrub beds with medium/large varieties used against high walls and fences.

Species to be selected from a palette container typical plants sub as those listed below: ( ) density/m2

Berberis frikartii 'Amstelveen'(5), Berberis thunbergii 'Atropurpurea Nana'(5), Bergenia cordfolia 'Silberlicht'(6), Ceanothus thrysiflorus repens(4), Chaenomeles superba 'Jet Trail'(4), Cornus alba 'Sparehii'(2), Cornus stolonifera 'Flaviramea'(2), Cytisus 'Allgold'(4), Elaeagnus pungens 'Maculata'(3), Escallonia 'Apple Blossom'(4), Euonymus fortunei 'Emerald Gaiety'(6), Festuca spp(6), Geranium 'Johnson's Blue'(4), Hebe albicans 'Red Edge'(4), Hebe 'Autumn Glory'(4), Hypericum x moserianum(4), Juniperus sabina 'Tamariscifolia' (3), Lavandula 'Hidcote'(6), Nepeta faassenii(4), Perovskia 'Blue Spire'(6), Phormium var, Potentilla 'Red Ace'(5), Prunus laurocerasus 'Zabeliana'(3), Pyracantha 'Orange Charmer'(3), Rubus x 'Betty Ashburner'(4), Spiraea 'Gold Flame'(4), Spiraea 'Shirobana'(4), Viburnum tinus 'Eve Price'(3)

HEDGE PLANTING

Hedges will be planted in selected plots to strengthen boundaries and improve screening. Ornamental hedge planting will consist of Beech and Escallonia. All of which which will contribute to all year round colour and texture. Beech hedges are to be planted as a double staggered row of 40-60cm high hedging plants. Escallonia hedges are to be planted as a single row of 40-60cm high hedging plants.

PUBLIC OPEN SPACE

The southern area of the site is within an area of flood risk (2 and 3) so it likely to flood due to its low lying position and its proximity to Blacup Beck. Large areas of existing planting will be retained in this area and the proposed native planting around the southern boundary will complement the existing vegetation and is to include tree species should as Alder, Willow species, River Birch which are ideal for areas of wetland. The open space around these will be sown with a wildflower seed for wetlands. The rest of the area will be sown with a species rich grass seed increasing the biodiversity of the site.

The native hedge planting at the entrance to the POS will not contain any Hawthorn due to its proximity to adjacent properties.

PLAY PROVISION

The proposed LEAP has been positioned in an area which will have some natural surveillance and is placed over 20m from the adjacent properties. It will contain a minimum of six play experiences and will be fixed play equipment designed into a natural play environment with localised groundmodelling and planting.

It will be raised slightly from the surrounding area to reduce the potential for damage is the area does flood.

Rev U: Updated to site layout BY00099-STH-B01-XX-DR-A SL001Rev.S (SF)	Aug 25
Rev T: Updated to include revised AIA (SF)	June 25
Rev S: Tree locations adjusted to accommodate street lighting and root barrier added to verges (SF)	April 25
Rev R: Grasscrete annotated for tanker access (SF)	April 25
Rev Q: Updated to site layout Rev.B (SF)	March 25
Rev P: Updated to ensure 5m offset from drainage in POS (SF)	July 24
Rev N: Minor adjustment to Planting bed numbers (CS)	Feb 24
Rev M: Site updated to latest Site Layout drawing Rev K (MBN)	Jan 24
Rev L: Drainage easement added adjacent plot 180 and trees amended (SF)	March 23
Rev K: Amend to area adjacent to Plot 180 (SF)	March 23
Rev J: Fence lines updated to plots 77-79, attenuation tank moved & culvert/ banking updated, Southern POS planting updated & tree's added (MBN)	Feb 23
Rev H: Minor amend to POS by plots 100-101 to acommodate easement (SF)	Feb 23
Rev G: POS area updated to reflect latest planning layout rev G (MBN)	Jan 23
Rev F: Minor amends to POS typologies (SF)	Dec 22
Rev E: Site fully updated to latest planning layout rev H (MBN)	Dec 22
Rev D: Minor amends to grass heirarchy (SF)	July 21
Rev C: Amended in line with Strata comments (MBN)	July 21
Rev B: Amended in line with Ecologists comments (SEL)	June 21
Rev A: Extra sections of acoustic fence added (SEL)	May 21

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client
Strata

project
Proposed Residential Development
WESTGATE, CLECKHEATON

drawing title
LANDSCAPE MASTERPLAN

scale	date	drwn by	drawing no
1:500 @A0	May 21	SEL	R/2487/1U

1:500 POS DETAILS

KEY

- Existing trees, hedges and vegetation to be retained.
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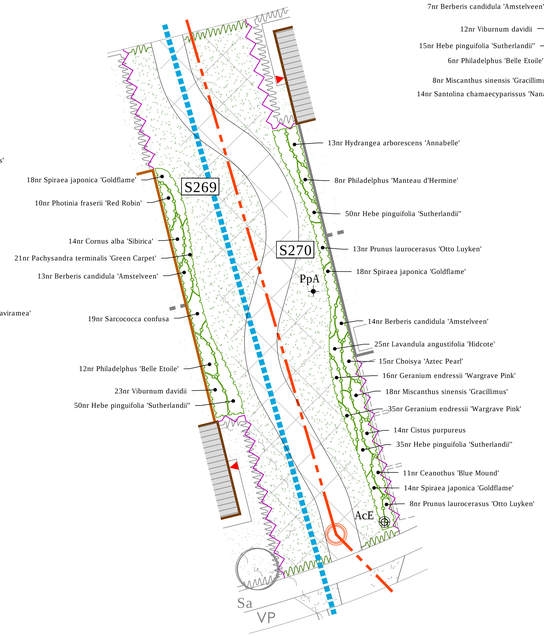
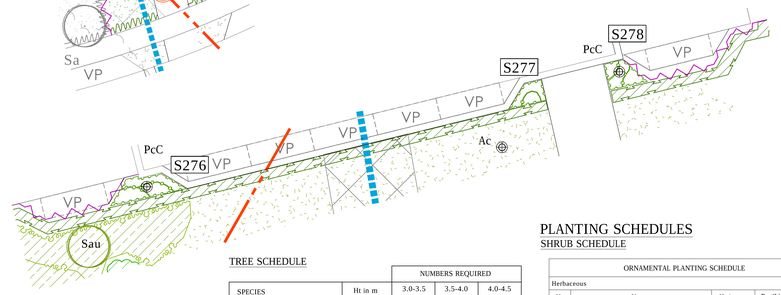
- Proposed Extra heavy standard (14-16cm girth) tree
- Proposed heavy standard (12-14cm girth) tree
- Proposed selected standard (10-12cm girth) tree
- Proposed Beech hedging
- Proposed evergreen flowering hedge (Escallonia)
- Proposed native hedge
- Proposed mixed native species shrub planting
- Proposed mixed native species tree & shrub planting
- Proposed ornamental shrub planting
- Proposed amenity grass seed
- Proposed wildflower grass seed for wet soils
- Proposed wildflower grass seed for basin banking
- Species rich grassland
- Mixed scrub
- Grasscrete to engineer's design
- Proposed 600mm high timber trip rail (detailed by others)
- Proposed 1200mm high vertical metal railing around play area (detailed by others)

1:200 SHRUB BED DETAILS





TREE SCHEDULE

SPECIES	Ht in m	NUMBERS REQUIRED		
		3.0-3.5	3.5-4.0	4.0-4.5
	Girth in cm	10-12	12-14	14-16
Acer campestre (Ac)		6	8	-
Acer campestre 'Elsrijk' (AcE)		-	1	-
Alnus glutinosa (Ag)		1	3	-
Amelanchier lamarckii (Al)		2	1	-
Betula nigra (Bn)		2	2	-
Betula pendula (Bp)		17	-	-
Betula pubescens (Bpu)		5	-	-
Crataegus monogyna (Cm)		5	-	-
Malus sylvestris (Ms)		4	-	-
Prunus avium (Pa)		-	3	-
Prunus avium 'Plena' (PaP)		-	6	-
Prunus padus 'Alberrii' (PpA)		1	-	-
Pyrus calleryana 'Chanticleer' (PcC)		-	2	-
Quercus petraea (Qp)		-	2	-
Quercus robur (Qr)		-	4	-
Salix alba (Sal)		-	4	-
Salix fragilis (Sf)		-	2	-
Sorbus aucuparia (Sau)		17	1	-

All trees to have clear stems to 1.8m above ground level with well developed branching heads with a single, central leader and healthy, fibrous root systems.
Trees shall be planted into pits of an appropriate size to accommodate the root system without restriction, backfilled with a 3:1 topsoil:compost mix and shall be secured to a machine rounded stake using 1 no. tree tie with rubber spacer. Finished height of stake shall not exceed 1/3 height of staked tree above ground.
Foundation design of new buildings shall accommodate proposed tree planting in accordance with NHBC guidelines.

NATIVE SPECIES PLANTING

OAK WOODLAND CORE MIX SCHEDULE					
Nr	Name	Height/cm	Age	Root	Pot/L
10	Alnus glutinosa	60-80cm		B	
30	Betula pendula	60-80cm		B	
15	Betula pendula Fsd	125-150cm	2x	B	
36	Betula pubescens	60-80cm	1/1	B	
23	Corylus avellana	60-80cm		B	
23	Crataegus monogyna	60-80cm		B	
15	Ilex aquifolium	40-60cm		C	
15	Lonicera periclymenum 'Belgica'	60-80cm		C	
63	Quercus petraea	60-80cm	1/1	B	
15	Quercus petraea Fsd	125-150cm	2x	B	
46	Quercus robur	60-80cm		B	
15	Sorbus aucuparia			B	

NATIVE HEDGE MIX SCHEDULE					
Nr	Name	Height/cm	Age	Root	Pot/L
45	Acer campestre	60-80cm	1/1	BR	
23	Corylus avellana	60-80cm	1/1	BR	
23	Ilex aquifolium	40-60cm		C	2L
272	Prunus spinosa	60-80cm	1/1	BR	
45	Rosa canina	40-60cm	1/1	BR	
45	Viburnum opulus	60-80cm	1/1	BR	

BIRCH AND ALDER MIX SCHEDULE					
Nr	Name	Height/cm	Age	Root	Pot/L
24	Acer campestre	60-80cm	0/1/1	B	
234	Alnus glutinosa	60-80cm		B	
38	Betula pendula	60-80cm	1/0	B	
93	Betula pubescens	60-80cm	1/1	B	
9	Corylus avellana	200-250cm		B	
9	Prunus avium	175-200cm		B	
24	Rosa canina	40-60cm		B	
14	Salix caprea	250-275cm	2x	B	
24	Salix cinerea	60-80cm		B	

NATIVE SHRUB MIX 1 SCHEDULE					
Nr	Name	Height/cm	Age	Root	Pot/L
34	Acer campestre	60-80cm	1/1	B	
134	Corylus avellana	40-60cm	1/1	B	
134	Euonymus europaeus	40-60cm		C	3L
66	Ilex aquifolium	40-60cm		C	3L
100	Prunus spinosa	60-80cm	1/1	B	
66	Rosa arvensis	60-80cm	1/1	B	
34	Sambucus nigra	60-80cm	1/1	B	
100	Viburnum opulus	60-80cm	1/1	B	

LOW NATIVE SHRUB MIX SCHEDULE					
Nr	Name	Height/cm	Age	Root	Pot/L
319	Cornus sanguinea	40-60cm	1/1	B	
158	Corylus avellana	60-80cm	1/2	B	
158	Cytisus scoparius	40-60cm		B	
80	Hedera helix	40-60cm		C	2L
41	Lonicera periclymenum	60-80cm		C	3L
239	Rosa arvensis	40-50cm	0/1	B	
239	Rosa canina	30-40cm		B	
41	Rubus fruticosa	40-60cm		C	2L
319	Viburnum opulus	40-60cm	1/1	B	

All plant material shall conform to BS3936 Parts 1and 4 and BS 4428. Transplants to be planted into prepared ground, containing a minimum depth of 450mm depth topsoil
complying with BS3882, 1994 and incorporating organic matter and slow release fertiliser.
Organic matter to be proprietary shrub planting compost, or approved compost derived from recycled organic matter. Slow release fertiliser to be 'Enmag' or similar.

Feathered trees to be planted at 3m centres in groups of 3-6, into pits 750 x 750 x 750mm, backfilled with 1part compost : 3 parts topsoil with 100gms slow release fertiliser added per pit. Trees to be staked with 75mm diam round stake secured by 1 no tree tie with rubber spacer. Finished height of stake shall not exceed 1/3 height of staked tree above ground.

GRASS SEEDING

WILDFLOWER MIX
Subsoil to be cultivated using a disc harrow or rotovator, to 30mm depth then further cultivated and rolled to produce a firm seed bed.
An 80% grasses:20% wildflower seed mix to be sown. Eg: Emorsgate Seeds EM2 Standard General Purpose Meadow Mixture at 4gm/square metre.

SPECIES RICH GRASS SEED MIX
Weeds to be removed from seed bed using repeated cultivation. Area then to be ploughed or dug to bury the surface vegetation before harrowing or raking to produce a medium tilth, and rolled to create a level flat surface.
An 80% grasses:20% wildflower seed mix to be sown. Eg: Emorsgate Seeds EL1 Flowering Lawn Mixture at 4gm/square metre.

AMENITY GRASS SEED MIX
100mm depth of topsoil complying with BS3882 to be spread to area and pre-seed fertiliser to be applied at 50gm/m². Soil to be cultivated using a disc harrow or rotovator, to 50mm depth then further cultivated and rolled to produce a firm seed bed. Low maintenance grass seed mix such as Germinal Seeds A22 mix to be sown at 35gm/m2 where indicated.

PLANTING SCHEDULES

SHRUB SCHEDULE

ORNAMENTAL PLANTING SCHEDULE				
Herbaceous				
Nr	Name	Ht in cm	Pot(L)	Density
44	Anemanthele lessoniana		3L	4.00
58	Geranium endressii 'Wargrave Pink'		3L	6.00
62	Miscanthus sinensis 'Gracillimus'		3L	5.00
11	Perovskia atriplicifolia 'Blue Spire'		3L	5.00
Shrub				
Nr	Name	Ht in cm	Pot(L)	Density
34	Berberis candidula 'Amstelveen'	25-30cm	3L	5.00
11	Ceanothus 'Blue Mound'	30-40cm	3L	4.00
26	Choisya 'Aztec Pearl'	30-40cm	3L	4.00
14	Cistus purpureus	30-40cm	3L	5.00
41	Cornus alba 'Sibirica'	50-60cm	3L	4.00
61	Cornus stolonifera 'Flaviramea'	60-80cm	3L	4.00
163	Hebe pinguifolia 'Sutherlandii"	25-30cm	3L	6.00
59	Hebe rakaiensis	25-30cm	3L	4.00
13	Hydrangea arborescens 'Annabelle'	50-60cm	3L	4.00
25	Lavandula angustifolia 'Hidcote'	25-30cm	3L	6.00
92	Pachysandra terminalis 'Green Carpet'	20-30cm(D)	3L	6.00
18	Philadelphus 'Belle Etoile'	30-40cm	3L	3.00
16	Philadelphus 'Manteau d'Hermine'	30-40cm	3L	3.00
20	Photinia fraserii 'Red Robin'	30-40cm	3L	3.00
10	Potentilla fruticosa 'Primrose Beauty'	20-30cm(D)	3L	5.00
35	Prunus laurocerasus 'Otto Luyken'	50-60cm	3L	4.00
57	Santolina chamaecyparissus 'Nana'	25-30cm	3L	6.00
43	Sarcococca confusa	20-25cm	3L	5.00
82	Spiraea japonica 'Goldflame'	30-40cm	3L	4.00
70	Viburnum davidii	25-30cm	3L	5.00
112	Vinca minor 'Bowles Variety'	15-20cm(D)	3L	9.00

All shrub material shall be first quality, sturdy, well rooted non-refridgerated stock with well branched heads and fibrous root systems. Shrubs shall be planted into 450mm good quality fibrous topsoil incorporating organic compost and slow release fertiliser in accordance with all good horticultural practice.
All plant material shall be a minimum of 3L pot size unless otherwise specified and conform to BS3936 Part 1 and BS 4428. Finished beds shall be lightly forked over and dressed with 50mm coarse forest bark mulch.

BEECH HEDGE SCHEDULE

Species	Age	Size in cm	Nos Reqd
Fagus sylvatica	1+1	60-80	345

Hedge to be planted as a double staggered row 500mm apart at 450mm centres (5/linm)

Rev.F : Existing trees to rear of Plots 92-94 shown as removed (CS) Aug 2025
Rev.E : One tree position adjusted to accommodated retaining wall (SF) Aug 2025
Rev.D : Updated AIA included and tree schedule updated (SF) June 2025
Rev.C : Grasscrete surface added to tanker access, drainage and play area updated (SF) April 2025
Rev.B : Access to attenuation tank amended (SF) March 2025
Rev.A: Removal of trees from drainage easements (SF) July 2024

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client: Strata

project: Proposed Residential Development

WESTGATE, CLECKHEATON

drawing title: POS DETAILS

scale	date	drawn by	drawing no
1:500 @A0	May 21	SEL	R/2487/14F