LEGEND

- Boundary
- Existing trees
- Existing vegetation
- Approximate location of existing invasive species. Refer to JCA Ecology for further information.
- Proposed trees
- Proposed evergreen hedge
- Proposed species-rich native hedge (Mix A) undeplanted with Emorgate EH1
- Proposed ornamental shrubs
- Proposed native structure/ scrub - Mix B
- Proposed native woodland - Mix C
- Proposed wet woodland scrub - Mix D
- Existing grassland overseeded with Emosgate EM1
- Proposed general purpose meadow Emorgate EG1
- Existing wet grassland overseeded with Emosgate EM5
- Proposed buildings/units

ZLA_1386-L-200 Plant Schedule

Trees (Standards)

Species Name	Height	Girth	Specification	No. Plants
Acer campestre 'Lienco'	425-600cm	14-16cm	Extra Heavy Standard ;Clear Stem min. 200 ;5 brks ;3x ;RB	13 -
Carpinus betulus 'Frans Fontaine' (EHS)	425-600cm	14-16cm	Extra Heavy Standard ;Clear Stem min. 200 ;RB	1 -

Trees (Feathered)

Species Name	Height	Girth	Specification	No. Plants
Acer campestre (Feather)	175-200cm	10-12cm	Feather ;5 brks ;2x ;BR	7 -
Malus sylvestris (Feather)	175-200cm	10-12cm	Feather ;5 brks ;2x ;BR	5 -
Prunus avium (Feather)	200-250cm	10-12cm	Feather ;5 brks ;2x ;BR	4 -

Trees (Whip)

Species Name	Height	Specification	Layout	No. Plants
Acer campestre (whip)	60-80cm	1+1 or 1/1 ;Whip ;BR	7/m	615 -
Betula pubescens (whip)	80-100cm	1+1 or 1/1 ;Whip ;BR	2/m²	832 -
Betula pubescens (whip)	60-80cm	1+1 or 1/1 ;Whip ;BR	2/m²	154 -
Corylus avellana (whip)	60-80cm	1+2 or 1/2 ;Whip ;Branched ;3 brks ;BR	2/m²	1634 -
Corylus avellana (whip)	60-80cm	1+2 or 1/2 ;Whip ;Branched ;3 brks ;BR	7/m	768 -
Crataegus monogyna (whip)	80-100cm	1+1 or 1/1 ;Whip ;Branched ;BR	2/m²	1685 -
Crataegus monogyna (whip)	80-100cm	1+1 or 1/1 ;Whip ;Branched ;BR	7/m	3829 -
Frangula alnus (whip)	80-100cm	1+1 or 1/1 ;Whip ;BR	2/m²	334 -
Prunus avium (whip)	80-100cm	1+1 ;Whip ;BR	2/m²	1248 -
Prunus avium (whip)	80-100cm	1+1 ;Whip ;BR	7/m	461 -
Quercus robur (whip)	60-80cm	1+2 or 1/2 ;Whip ;BR	2/m²	832 -
Salix caprea (whip)	80-100cm	0/1 ;Whip ;Branched ;2 brks ;BR	2/m²	832 -
Salix cinerea (whip)	80-100cm	1+1 ;Whip ;BR	2/m²	52 -
Sorbus aucuparia (whip)	60-80cm	1+1 or 1/1 ;Whip ;BR	2/m²	832 -

Shrubs (Whip)

Species Name	Height	Specification	Layout	No. Plants
Alnus glutinosa (Whip)	80-100cm	1+2 or 1/2 ;Whip ;Branched ;3 brks ;BR	2/m²	78 -
Cornus sanguinea (whip)	60-80cm	1+2 or 1/2 ;Whip ;Branched ;3 brks ;BR	2/m²	398 -
Euonymus europaeus (whip)	60-80cm	1+1 or 1/2 ;Whip ;Branched ;3 brks ;BR	2/m²	222 -
Prunus spinosa (whip)	80-100cm	1+2 or 1/2 ;Whip ;Branched ;3 brks ;BR	7/m	615 -
Rhamnus cathartica (whip)	40-60cm	1+1 or 1/2 ;Whip ;Branched ;3 brks ;BR	2/m²	179 -
Rosa canina	60-80cm	1+1 or 1/1 ;Whip ;Branched ;3 brks ;BR	7/m	615 -
Sambucus nigra (whip)	60-80cm	1+1 or 1/1 ;Whip ;Branched ;3 brks ;BR	2/m²	52 -
Viburnum lantana (whip)	60-80cm	1+2 or 1/2 ;Whip ;Branched ;3 brks ;BR	2/m²	267 -
Viburnum opulus (whip)	60-80cm	1+2 or 1/2 ;Whip ;Branched ;3 brks ;BR	7/m	768 -
Viburnum opulus (whip)	60-80cm	1+2 or 1/2 ;Whip ;Branched ;3 brks ;BR	2/m²	27 -

Shrubs

Species Name	Height	Specification	Pot Size	Layout	No. Plants
Berberis thunbergii	20-30cm	Bushy ;3 brks ;C	3L	3/m²	35 -
Cornus sanguinea 'Midwinter Fire'	30-40cm	Branched ;3 brks ;C	3L	3/m²	61 -
Cornus stolonifera 'Flaviramea'	40-60cm	Branched ;3 brks ;C	3L	3/m²	33 -
Cotinus coggygria 'Royal Purple'	30-40cm	Bushy ;3 brks ;C	3L	3/m²	94 -
Escallonia 'Apple Blossom'	30-40cm	Bushy ;3 brks ;C	3L	3/m²	44 -
Escallonia 'Iveyi'	30-40cm	Branched ;3 brks ;C	3L	3/m²	39 -
Ginselina littoralis	40-60cm	Bushy ;3 brks ;C	3L	3/m	76 -
Ginselina littoralis	40-60cm	Bushy ;3 brks ;C	2L	2.5/m	204 -
Hebe 'Midsummer Beauty'	30-40cm	Bushy ;3 brks ;C	3L	3/m²	133 -
Hypericum 'Hidcote'	30-40cm	Branched ;3 brks ;C	3L	3/m²	33 -
Ilex aquifolium	40-60cm	Bushy ;3 brks ;C	2L	2/m²	572 -
Photinia 'Little Red Robin'	40-60cm	Bushy ;3 brks ;C	3L	3/m²	72 -
Prunus laurocerasus 'Otto Luyken'	30-40cm	Branched ;3 brks ;C	3L	3/m²	87 -
Rhamnus cathartica (whip)	40-60cm	1+1 ;Branched ;3 brks ;BR		2/m²	832 -
Rosa arvensis	30-40cm	Branched ;3 brks ;C	3L	3/m²	60 -
Spiraea japonica 'Anthony Waterer'	20-30cm	Bushy ;3 brks ;C	3L	3/m²	17 -
Vinca major	10-15cm	Branched ;3 brks ;C	2L	5/m²	307 -
Vinca minor 'Gertrude Jekyll'		Several shoots ;3 brks ;C	2L	4/m²	43 -

Mix A1
178 No.Acer campestre (whip)
223 No.Corylus avellana (whip)
1111 No.Crataegus monogyna (whip)
134 No.Prunus avium (whip)
178 No.Prunus spinosa (whip)
178 No.Rosa canina
223 No.Viburnum opulus (whip)

Mix A2
50 No.Acer campestre (whip)
307 No.Corylus avellana (whip)
307 No.Crataegus monogyna (whip)
92 No.Prunus avium (whip)
50 No.Prunus spinosa (whip)
50 No.Rosa canina
62 No.Viburnum opulus (whip)

Mix A3
309 No.Acer campestre (whip)
386 No.Corylus avellana (whip)
1545 No.Crataegus monogyna (whip)
309 No.Prunus avium (whip)
309 No.Prunus spinosa (whip)
309 No.Rosa canina
386 No.Viburnum opulus (whip)

Mix A4
78 No.Acer campestre (whip)
97 No.Corylus avellana (whip)
484 No.Crataegus monogyna (whip)
78 No.Prunus avium (whip)
78 No.Prunus spinosa (whip)
78 No.Rosa canina
97 No.Viburnum opulus (whip)

Mix B1
23 No.Cornus sanguinea (whip)
20 No.Corylus avellana (whip)
19 No.Crataegus monogyna (whip)
23 No.Euonymus europaeus (whip)
23 No.Frangula alnus (whip)
46 No.Ilex aquifolium
11 No.Rhamnus cathartica (whip)
16 No.Viburnum lantana (whip)

Mix B3
5 No.Cornus sanguinea (whip)
5 No.Corylus avellana (whip)
5 No.Crataegus monogyna (whip)
5 No.Euonymus europaeus (whip)
5 No.Frangula alnus (whip)
5 No.Ilex aquifolium
4 No.Rhamnus cathartica (whip)
4 No.Viburnum lantana (whip)

Mix B3
10 No.Cornus sanguinea (whip)
9 No.Corylus avellana (whip)
9 No.Crataegus monogyna (whip)
9 No.Euonymus europaeus (whip)
9 No.Frangula alnus (whip)
9 No.Ilex aquifolium
9 No.Rhamnus cathartica (whip)
7 No.Viburnum lantana (whip)

Mix B4
360 No.Cornus sanguinea (whip)
300 No.Corylus avellana (whip)
300 No.Crataegus monogyna (whip)
300 No.Euonymus europaeus (whip)
300 No.Frangula alnus (whip)
300 No.Ilex aquifolium
160 No.Rhamnus cathartica (whip)
240 No.Viburnum lantana (whip)

Mix C1
359 No.Betula pubescens (whip)
359 No.Corylus avellana (whip)
359 No.Crataegus monogyna (whip)
320 No.Ilex aquifolium
359 No.Prunus avium (whip)
359 No.Quercus robur (whip)
359 No.Rhamnus cathartica (whip)
359 No.Salix caprea (whip)
359 No.Sorbus aucuparia (whip)

Mix C2
512 No.Betula pubescens (whip)
512 No.Corylus avellana (whip)
768 No.Crataegus monogyna (whip)
768 No.Ilex aquifolium
768 No.Prunus avium (whip)
512 No.Quercus robur (whip)
512 No.Rhamnus cathartica (whip)
512 No.Salix caprea (whip)
512 No.Sorbus aucuparia (whip)

Mix C3
81 No.Betula pubescens (whip)
171 No.Corylus avellana (whip)
171 No.Crataegus monogyna (whip)
41 No.Ilex aquifolium
121 No.Prunus avium (whip)
81 No.Quercus robur (whip)
81 No.Rhamnus cathartica (whip)
81 No.Salix caprea (whip)
81 No.Sorbus aucuparia (whip)

Mix D1
58 No.Alnus glutinosa (Whip)
115 No.Betula pubescens (whip)
99 No.Corylus avellana (whip)
77 No.Crataegus monogyna (whip)
89 No.Salix cinerea (whip)
20 No.Sambucus nigra (whip)
20 No.Viburnum opulus (whip)

Mix D2
20 No.Alnus glutinosa (Whip)
39 No.Betula pubescens (whip)
13 No.Corylus avellana (whip)
26 No.Crataegus monogyna (whip)
13 No.Salix cinerea (whip)
13 No.Sambucus nigra (whip)
7 No.Viburnum opulus (whip)

DRAWING NOTES

GENERAL NOTES:
- The contractor is to liaise with the main contractor to establish the position of as-built services and manhole covers prior to cultivation and excavation of planted areas and tree pits.
- If there is any conflict in the information indicated on the contract drawings, the contractor must seek clarification from all the design consultants involved.
- Native species: Use local provenance.
- All trees and planting will commence during the first planting season following completion of the building and infrastructure works (October to March inclusive).
- Grass and wildflower seeding will be implemented following completion of the building and infrastructure works subject to suitable climatic conditions.
- No planting or seeding to take place during unfavourable climatic conditions such as waterlogged ground or periods of frost.
- All trees, planting and grass areas will be subject to a 12-month Maintenance and 5 year Defects Liability Period.
- Failing plant material: All planting that fails to thrive in 5 years following Practical Completion will be replaced during the next available growing season due to failure to maintain by others, theft or damage. Replacements to be the same species and size unless otherwise agreed.

EXISTING FEATURES:
- The existing dry stone wall and Sustainable Urban Drainage Feature (SUDs) situated alongside sections of the perimeter is to be retained and incorporated into the proposals and ongoing management. Locations indicated in the UKHab Habitat Map (JCA Ecology).
- All invasive species as identified by JCA Ecology and indicated in this drawing to be treated and disposed appropriately before progressing works.
- Existing planting to be integrated into the proposals.

SETTING OUT NOTES:
- All tree and shrub planting is to be pegged/set out for approval by the Landscape Architect prior to planting.
- Tree planting in relation to manhole covers and statutory runs is to be co-ordinated with the main contractor and in accordance with statutory guidelines, for approval by the landscape architect.
- Tree positions are to be set out and staked for approval by the Landscape Architect and Engineer prior to planting.
- Planting adjacent to road kerbs and path edges along roads is to be set back 300mm from the back of kerb to allow room for plants to establish and reduce trampling, but unplanted area to be mulched.
- Ensure that Root Barrier has been installed in the foundation trench before planting any trees on the site. Contact Engineers to determine specification and depth required.
- Planting adjacent to existing vegetation to be retained to be carefully integrated with existing planting, and cultivation's evenly graded into existing levels.
- Trees are to be set out to ensure a minimum of 1.5m exists between tree stations and drains/mains lines, in accordance with BS5837. Otherwise, approved root barriers should be employed.

DENSITY NOTES:
- Amenity planting to be carried out at approximately 3no. plants per m², unless otherwise stated in the plant schedule.
- Mixes B and C to be carried out at approximately 2no. plants per m², unless otherwise stated in the plant schedule.
- Native planting to be randomly planted in groups of 8-15 no. plants of a single species and any evergreen species are to be distributed evenly throughout the planted area.
- Evergreen hedge planting to be at 2.5no. plants per linear metre, unless otherwise stated in the plant schedule.
- Native hedge planting to be at 7no. plants per linear metre, double staggered, unless otherwise stated in the plant schedule.

WHIPS:
- Whips will have a well-defined, straight, upright leader, without significant lateral shoots.
- Transplanted at least once.
- Height as specified.
- Preparation: Cut and upturn a turf of minimum 500 mm square.
- Notching: Make a vertical slit from the centre of the turf, to the side away from the prevailing wind.
- Depth: To accommodate full depth of roots.
- Planting: Plant tree, close notch with root collar at ground level and firm the soil.
- Fertiliser (gms) /Water storing polymer 25 gms per tree pit as follows
- Prune: Do not prune

TREE AND SHRUB NOTES:
- All planting to be planted in accordance with BS 8545
- Cultivate and weed-kill all areas to be planted/turfed as per Soft Landscape Specification.
- Ameliorate soil prior to planting. Water retaining polymer to be in planting pit only.
- All trees to be staked and protected with spiral guards.
- Tree planting in soft areas to be in topsoiled tree pits as per depths noted below.
- All planting to be bark mulched to a depth of 50mm with Melcourt's 'Ornamental Spruce'.

TOPSOIL NOTES:
- All areas to be landscaped are to be free from contaminated ground.
- All areas to be planted are to be topsoiled to a depth of 400mm.
- All areas to be turfed are to be topsoiled to a depth of 150mm.
- Ensure adequate growing medium exists to provide sustained healthy plant growth beyond the Defects Liability Period.

TREE PIT NOTES:
- All trees are to be planted in tree pits and topsoiled to the following dimensions:
- Advanced stock trees - 1200mm x 1200mm x 900mm deep
- Feathered trees - 900mm x 900mm x 450mm deep
- Excavated material: Separate topsoil and subsoil material and stockpile for backfilling.
- Pit bottoms: Excavate with slightly raised centre: Break up base to a depth of 100 mm.
- Treatment: Soil ameliorant worked into pit bottoms.
- Pit sides: Scarify
- Retain topsoil for re-use where specified.
- In sloping ground, maintain horizontal bases and vertical sides with no less than minimum depth throughout.
- Backfill with clean topsoil either salvaged or imported to BS2882: 2007.
- Soil/compost % - 80-20 on medium soils; 50;50 on sandy soil; 70;30 on clay soils; Water storing polymer may not be necessary on naturally damp soils; i.e. heavy clays.
- Fertiliser (gms) /Water storing polymer (gms) per tree pit as follows
  -Advanced stock trees 300gms/1000gms
  -Feathered trees 100gms/150gms

TREE STAKES:
- Stakes: Stakes to be pressure impregnated softwood (not with creosote or tar), round or half round as specified, straight, peeled, free from projections and large or end knots, pointed at one end.
- Preservative treatment: Not required.
- Size: minimum length and thickness as shown below:
  -Advanced stock trees - 125mm min dia, 2m total length, 600mm above ground; 2no. stakes, 1no. cross bar and 1 tree tie
  -Feathered trees -50mm min dia, 1.6m total length, 600mm above ground; 1no. stake and 1 tree tie.

GRASS AREAS:
- Areas to be turfed to be treated with herbicide to suppress perennial weeds before cultivation. Apply soil ameliorant over turf bed prior to cultivation in accordance with manufacturers instructions.
- Apply fertiliser 3 to 5 days before seeding/ turfing to grass areas (except wildflower areas) at a rate of 50 g/m².
- Lawn areas are to be turfed with Rolawn Medallion® and protected with fencing as specified until directed otherwise by the CA.
- Water as necessary to ensure establishment and continued thriving of all grass areas.
- Any areas that are too narrow to be laid to turf should be surfaced with decorative gravel over weed-suppressant membrane.
- Disturbed grass areas are to be cultivated to a fine tilth and seeded.
- Undisturbed grass areas are to be scarified and over-seeded where necessary.

WILDFLOWER NOTES:
- All wildflower areas to be seeded as identified in the Key. To be sown as per manufacturers recommendations.
- www.wildseed.co.uk

STRIP OF EXISTING TOPSOIL:
- The site topsoil which is to be retained for later use shall be stripped and stockpiled.
- The following method shall be used:
- During suitable dry weather conditions, the existing vegetation shall be treated with herbicide as directed.
- Site to be cleared of foreign materials.
- During suitable dry weather conditions, topsoil to be stripped down to its full natural depth, taking care to avoid contamination with subsoil or other foreign materials.
- Excavated topsoil unsuitable to be reused as topsoil shall be stored separately and used as subsoil.

TOPSOIL STORAGE:
- Topsoil which has been stripped and stored before use in the works shall not have been stacked in heaps higher than 1.5m for more than four weeks.
- Stored topsoil shall not have become waterlogged, compacted or de-structured.

IMPORTED TOPSOIL FOR ALL SOFT LANDSCAPE FINISHES:
- Provide topsoil to BS3882: 2007 as necessary to make up any deficiency of topsoil existing on site and to complete the work.

SAMPLE LOAD OF IMPORTED TOPSOIL:
- Deliver to site a sample load of not less than 5m³.
- Give notice to all CA to inspect before making further deliveries to site.
- Retain sample for comparison with subsequent loads.

DEFICIENT TOPSOIL:
- Any topsoil offered which is deficient in nutrient levels as required by BS3882:1994 but which otherwise conforms to the specification, may be acceptable providing suitable adjustments are made with the addition of organic and inorganic fertilisers to the satisfaction of the CA and entirely at the landscape contractor's expense.

CONTAMINATION:
- Do not use topsoil contaminated with subsoil, rubbish or other materials that are corrosive, explosive or flammable; hazardous to human or animal life; detrimental to healthy plant growth.
- In areas to receive topsoil, do not use subsoil contaminated with the above materials.
- Give notice to CA if any evidence or symptoms of soil contamination are discovered on the site or in topsoil to be imported.

HANDLING TOPSOIL:
- Give notice of evidence of aggressive weeds and obtain instructions before moving topsoil.
- Select and use plant to minimise disturbance, trafficking and compaction.
- Do not mix topsoil with subsoil, stone, hardcore, rubbish or material from demolition work; other grades of topsoil.
- Keep handling to a minimum and use topsoil immediately after stripping.
- Handle topsoil in the driest conditions possible and do not handle during or after heavy rainfall or when it is wetter than the plastic limit.

SPREADING TOPSOIL:
- Remove temporary roads/surfacing before spreading topsoil.
- Spread in layers of 150mm depth (max.) and gently firm each layer before spreading the next.

FINISHED LEVELS OF TOPSOIL AFTER SETTLEMENT:

Above adjoining paving or kerbs.....50mm
Below dpc of adjoining buildings.....Not less than 200mm
Shrub areas.....Higher than adjoining grass areas by 50mm
Within root spread of existing trees.....Unchanged
Thickness of turf or mulch is included.

zebra LANDSCAPE ARCHITECTS

PCS PROPERTY SOLUTIONS LTD

ZLA_1386
Land at Grange Moor
Wakefield

L-201
Detailed Planting

date January 2023
status planning

rev **C**

A	Updates following feedback from JCA Ecology	23/01/23
B	Update to include drainage design and scrub planting to southern and western perimeter	13/02/23
C	Update planting following transport updates	14/02/23

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scale 1 : 500 @ A0
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30 St. Georges Square | Worcester |WR1 1HX | 01905 947 558
h e l l o @ z e b r a l a n d s c a p e s . c o . u k

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