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Planting Plan Key:

- Site Boundary
- Proposed ornamental planting on 400mm depth of topsoil with 75mm bark mulch.
- Proposed native tree planting, tree pit and double staking as detailed in the specification.
- Proposed ornamental tree planting, tree pit and double staking as detailed in the specification.
- Proposed mixed native hedgerow planted in a double staggered row at 0.3m centres and 0.3 offset. Bare root transplants, each with a 60cm high Tubex shrub shelter, two cable ties and a timber stake.
- Areas to be turfed on 150mm topsoil.
- Native shrub planting to be planted as 60-80cm whip planting at 1m centres, for additional wildlife habitat.
- Wildflower seeding, WF19 Pollinators Paradise, to be sown at 2g/m2.



REV	DESCRIPTION	DATE

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PROJECT:
CRODA EUROPE OFFICE, LEEK

DRAWING TITLE:
PLANTING PLAN (SHEET 1 of 2)

SCALE:	DRAWN BY:	DRAWING No:	REV:
1:250 @A1	SC		
DATE:	CHKD BY:		
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LANDSCAPE AND MAINTENANCE SPECIFICATION

All operations to comply with appropriate British Standards unless otherwise stated on drawings or in the specification.

GENERAL TREATMENT OF PLANTING AREAS

Ensure that planting areas are protected from consolidation by heavy construction plant.

For work near a retained tree: Refer to BS 5837 *Trees in relation to design, demolition & construction - Recommendations*- Section 9 (Appendix C).

Damage to Plants to be Retained: If a plant is to be retained is damaged, the plant is to be repaired or replaced by the contractor at their own expense. "Damaged" means:

- The destruction of a plant the breaking of branches or roots
- The debarking of trunks or limbs
- The contamination of root zone soil or plants from drift sprays, dust or contaminated storm water
- The damage by the placement of fill or building materials within the canopy perimeter or otherwise.

1) GROUND PREPARATION AND SOIL SPECIFICATION

Subsoil:
Before receiving topsoil, subsoil shall be loosened using appropriate equipment to a depth of 300mm. This shall be done when the subsoil is dry so as to encourage soil shattering. All stones and other objects larger than 50mm shall be removed from the prepared surface. The loosened subsoil shall be roughly levelled so that an even depth of topsoil can be achieved.

Topsoil (To Comply with British Standard 3882:2015 - Specification for Topsoil):
Imported topsoil shall be Multipurpose Grade as described in BS 3882:2015 and suitable for sustaining plant life. Stockpiling of soil shall be avoided whenever possible to minimise loss of physical quality, diffusion of oxygen and biological activity.
Any stockpiling shall not exceed 1.5 metres high and shall be sited so as to avoid risk of muddy water run-off into a watercourse, not exceeding 1.5 metres high.
The site of the stockpile will be prepared in advance by grading, removing rubbish and ensuring no fuel or chemicals were previously stored in area.
Topsoil shall be lightly consolidated in layers not exceeding 150mm using track laying machinery.
Soil shall not be handled in inappropriate conditions of weather and soil moisture i.e.
During or shortly after heavy precipitation
When soil is in a waterlogged condition
When the ground is frozen or covered by snow
When there are pools of water on the grounds surface.
Topsoil shall be laid to the following minimum depths:
150mm below new grass areas
300mm to rear gardens
400mm beneath new shrub areas.
Finished levels, after settlement, shall be as follows:
25mm above adjacent paving from new grassed areas and non-mulched shrub beds
75mm below adjacent paving and grass for mulched planting beds.
150mm below damp proof courses.

2) GROUND CONDITIONING
40 litres of compost to be incorporated into the top 200mm of each square metre of topsoil for all ornamental shrub beds.

3) PLANT AND PLANTING SPECIFICATION
All plant stock, plant handling and planting to be undertaken in accordance with the following British Standard Specifications and Code of Practice:
BS 8545:2014 'Trees: from nursery to independence in the landscape
BS 3936: Part 1 1992 Nursery stock (Specification for trees and shrubs)
BS 3936: Part 4 1984 Nursery stock (Specification for forest trees)
BS 3936: Part 9 1987 Nursery stock (Specification for bulbs, corms and tubers)
BS 3936: Part 10 1990 Nursery stock (Specification for ground cover plants)
BS 4428: 1989 Recommendations for general landscaping operations.
BS 4043: 1989 Recommendations for transplanting root-balled trees. (withdrawn)
The Code of Practice for Plant Handling 1985. (Horticultural Trades Association).

Plant Stock:
Plant stock to be supplied in accordance with the size and description specified ion the plant schedule and position indicated on the most current revision of the planting plan.

Plant stock shall be healthy, vigorous, free from pests and diseases and suitably hardened off for the proposed situation of planting and lifted at a time in accordance with good nursery practice. Stock shall have a well-formed fibrous root system and be free from perennial weeds. The form of trees shall be in accordance with BS 3936: Part 1:1992, Section 7, *Form of Trees.*

Plant Handling:
All plant materials shall be lifted, bundled, labelled, packaged, transported, temporarily stored and planted in accordance with the procedures and methods illustrated in the publication, "*Plant Handling*" (Horticultural; Trades Association) and relevant sections of BS 4043: 1989 *Transplanting Root-Balled Trees*.

Tree Planting:
Trees to be pit planted following supplier recommendations. Minimum pit size: Selected standard tree 750 x 750 x 700, Extra heavy standard tree 1200 x 1200 x 1000mm. Pits to be prepared to base and sides of pit to be further scarified.
Trees to be double staked using two stakes (75mm dia.), driven into ground 400mm below bottom of pit. Trees to be centrally located and stem placed in an upright position. Pit to be backfilled with 200-600mm (dependant on depth of pit due to size of tree) of a mix of subsoil with a 70 to 80% mix of sharp sand. Irrigation pipe to put around bottom of rootball with 25mm of pipe sticking out from the bark mulch level. Backfill remaining area of pit with 400mm of a 3:1 mix of an approved topsoil with compost. Backfill firmly to 50mm above previous ground level and creating a slightly domed shape with the highest point being at the centre of the tree to assist drainage and settlement. Tree pits in grass to contain a 600mm diameter circle of medium grade bark mulch to a settled depth of 75mm.
Water each tree in same day of planting, 30 to 50 litres per tree dependant on size and soil conditions.
All works shall be carried out to the minimum standard according to BS 3936: 1992 Part 1 Nursery Stock. Specification for Trees and Shrubs. BS 4043: 1989 Recommendations for transplanting root-balled trees.

Staking:
Double stake all trees with two stakes, a crossbar, a spacer and webbing. Stakes to be round timber with chamfered tops. Position stake close to tree on windward side and drive vertically at least 400mm into bottom of pit before planting. Backfilling: consolidate material around stake. Height of stakes: cut to approximately 600mm above ground level, taking care not to damage the bark. Ties: Webbing with a spacer. Tying: secure tree firmly to crossbar with spacer and webbing.

Mulch:
All shrub beds shall be spread with a medium grade bark mulch to a settled depth of 75mm. Tree locations in grass should have a 600mm diameter circle of medium grade bark mulch to a settled depth of 75mm. Mulch to be free from fines, weeds, disease and contaminants.

Ornamental shrub planting:
To be set out carefully and evenly over indicated areas. Remove plants from pots and plastic containers, plant and water in thoroughly. Shrubs shall be individually pit planted in prepared
pits sized to accommodate full spread of roots. Plants shall be evenly spaced over the planting area. Firm backfill by treading, ensuring the ground is not overly compacted and that the plant is positioned upright.

Native shrub planting
Bare root stock shall be planted between November and March. Plants to be planted in groups of 5, 7, or 9 of the same species. Plants shall be evenly spaced over the planting area. Ensure plants are planted to the correct depth to correspond to the soil mark on main stems. Undertake formative pruning if necessary. Each plant to be protected with a 60cm high tubex shrub shelter, with two cable ties and a timber stake.

New mixed native hedgerows - Double staggered
Bare root stock shall be planted between November and March. Consistent in species, cultivar and clone to ensure a uniform hedge. Plants to be planted in groups of 3, 5 or 7 of the same species. To be planted in a previously prepared planting trench 300mm deep and up to 1metre. Trench backfilled with 300mm of a 3:1 mix of an approved topsoil with compost. Backfill firmly to 50mm above previous ground level and creating a slightly domed shape with the highest point being at the centre of the tree to assist drainage and settlement. Planting bed to be covered with a medium grade bark mulch to a settled depth of 75mm.
Plant stock to be planted in a double row in the centre of the plant bed, 330mm between plants and 300mm between rows (6 no. plants per linear metre). Ensure plants are planted to the correct depth to correspond to the soil mark on main stems. Each plant to be protected with a 60cm high tubex shrub shelter, with two cable ties and a timber stake.
Prune back to a height of 2 metres.

Turfed Areas:
To be specified and laid in accordance with BS. 3936:1998 Recommendations for turf for general purposes. Turf to be Lindum Festival Turf (or similar approved). Hardwearing with a dense sward containing a mixture of 25% perennial ryegrass, 55% fescues and 20% smooth stalked meadow grass. This mix is easy to maintain and will recover well from general wear.
Turf to be laid in suitable weather conditions on a prepared bed with no weeds and a suitable slow release fertiliser applied to bed prior to laying. Turf to be watered regularly until it is well established.

Wildflower **Seeding:**
Seed mix shall be Germinal WF19 Pollinators Paradise, or similar approved. Sowing to be taken between March and October.
Topsoil shall be cultivated to a fine tilth, be free from weeds, stones and other debris. Sow at rate of 2 g/m2 and lightly rake. First cut to be undertaken 6 weeks after sowing or when reaches 70-100mm.

4) MAINTENANCE AND MANAGEMENT

Plant stock and soft landscaped areas shall be maintained for a period of five years via the developers' agent or appointed Management Company during which time the following operations shall be carried out:

Regular visits:
Monthly maintenance visits to include the following operations:

- Hand weed planting beds
- Remove litter
- Sweep mulch spillage
- Re-firming plant stock to ensure the new planting is all planting to upright positions.
- Adjust stakes and ties as necessary
- Prune plant stock as required to encourage good form
- Check all plant stock and report signs of pests, disease, death and damage

Mulch:
Top up mulch levels (using matching material) surrounding trees and within beds to 75mm at the end of the maintenance period.

Watering:
Plant stock to receive the following quantities of water:
Trees: Water each tree regularly between April and September, particularly during hot/ dry periods.
Shrubs and transplants: 5 litres/plant on three occasions throughout growing season.
Watering to be undertaken during the first 24 months as needed to maintain plant health.

Grass Maintenance:
Grass shall be cut throughout the growing season to maintain a sward of approximately 38mm. Shall be edged, watered as necessary and clippings removed.

Wildflower Maintenance:

WF19 Pollinators Paradise Wildflower mix Maintenance

Wildflower areas shall be cut 2 times a year during the spring (late April/early May) and after the flower season (early October) to maintain a sward of approximately 70-100mm. The clippings shall be left in situ for 3 days to allow seed drop, then removed to prevent nutrient build up.

Cut down to 70-100mm from late September/early October). Remove arisings. If practical consider leaving up to one fifth of the area uncut, the remaining dead stalks will provide a nesting and hibernation site and egg laying
habitat for invertebrates over the winter. Alternate this area each winter.

Native Shrub Maintenance
Weed control by hand to ensure planting area is weed free. Check Tubex shelter protection and stakes and repair/replace as necessary.
After year 2 any dead plants to be removed and replaced. An assessment to be undertaken at this time to ensure replacement species are ones which have proven so far successful in the rest of the planted area.
Pruning; Prune plants back annually to promote bushy growth.
Thinning; After 10 years native shrub areas to be thinned out by selective removal of 15-20% of establishing plants.An assessment will be made to identify suitable plants for removal based on health,form and success of adaption to site conditions.
Coppicing; Hazel (Corylus Avellana) to be coppiced after 10 years and thereafter every 7 years on selective cycles.

New Tree/Shrub Planting:
Weed control by hand to ensure planting area is weed free. Check stakes and guards are in place and replace where necessary. Prune, thin and remove suckers, seedlings, dead, damaged, or diseased branches annually between October and January to avoid the bird nesting season. Replace dead / dying stock in winter.

Plant replacements:
All dead, dying and vandalised plant stock shall be replaced, at the landscape contractor's expense, at the end of each growing season throughout the maintenance period.

Planting Schedule

Trees

Number of Plants	Abbreviation	Species	Specification	Height	Girth	Density
2 -	ACE ELS	Acer campestre 'Elsrijk'	Selected Standard: 4 brks: 2x: RB: Clear Stem min. 200cm	300-350cm	10-12cm	Counted
2 -	B pe	Betula pendula	Selected Standard: 4 brks: 2x: RB: Clear Stem 175-200cm	300-350cm	10-12cm	Counted
3 -	BET PEN	Betula pendula	Extra Heavy Standard: 3x: RB: Clear Stem min. 200cm	450-500cm	18-20cm	Counted
2 -	C be	Carpinus betulus	Extra Heavy Standard: 5 brks: 3x: RB: Clear Stem 175-200cm	400-450cm	14-16cm	Counted
1 -	COR COL	Corylus colurna	Selected Standard: 4 brks: 2x: RB: Clear Stem 175-200cm	300-350cm	10-12cm	Counted
1 -	CRA SCA	Crataegus laevigata 'Paul's Scarlet'	Selected Standard: 4 brks: 2x: RB: Clear Stem 175-200cm	300-350cm	10-12cm	Counted
1 -	C mon	Crataegus monogyna	Selected Standard: 4 brks: 2x: RB: Clear Stem 175-200cm	300-350cm	10-12cm	Counted
3 -	FAG SYL	Fagus sylvatica	Extra Heavy Standard: 5 brks: 3x: RB: Clear Stem 175-200cm	400-450cm	14-16cm	Counted
3 -	PIN SYL	Pinus sylvestris	Extra Heavy Standard: Leader & laterals: Feathered tio base: 5x: RB	350-400cm		Counted
3 -	QUE ROB	Quercus robur	Extra Heavy Standard: 5 brks: 3x: RB: Clear Stem 175-200cm	400-450cm	14-16cm	Counted
1 -	TIL GRE	Tilia cordata 'Greenspire'	Selected Standard: 4 brks: 2x: RB: Clear Stem 175-200cm	300-350cm	10-12cm	Counted
Total :22 -						

Shrubs

Number of Plants	Abbreviation	Species	Specification	Height	Pot Size	Density	Area
16 -	BUD KNI	Buddleja davidii 'Black Knight'	Branched: 4 brks: C	40-60cm	3L	2/m²	7.6695m²
18 -	COR PUR	Corylus maxima 'Purpurea'	Branched: 2 brks: C	40-60cm	3L	1/m²	16.9714m²
49 -	HYD WAV	Hydrangea macrophylla 'Blue Wave'	Branched: 5 brks: C	40-60cm	5L	1/m²	45.5266m²
36 -	LAV PED	Lavandula stoechas pedunculata	Bushy: 5 brks: C	15-20cm	2L	4/m²	8.8926m²
193 -	PAC TER	Pachysandra terminalis	Several Shoots: 9 brks: C		3L	4/m²	47.2118m²
38 -	ROSFRN	Rosa 'Fritz Nobis'	Branched: 3 brks: C	30-40cm	3L	1/m²	35.2495m²
154 -	SAR DIG	Sarcococca hookeriana digyna	Bushy: 6 brks: C	20-30cm	3L	4/m²	38.2133m²
18 -	SPI ARG	Spiraea 'Arguta'	Branched: 5 brks: C	40-60cm	3L	1/m²	15.9509m²
20 -	VIBOPR	Viburnum opulus 'Roseum'	Branched: 2 brks: C	40-60cm	3L	1/m²	18.2655m²
16 -	VIB DAW	Viburnum x bodnantense 'Dawn'	Branched: 2 brks: C	40-60cm	3L	1/m²	15.3034m²
68 -	VIN ALB	Vinca minor 'Alba'	Several Shoots: 3 brks: C		3L	4/m²	16.5852m²
Total :626 -							Total :265.8397m²

Herbaceous

Number of Plants	Abbreviation	Species	Specification	Pot Size	Density	Area
31 -	ALC MOL	Alchemilla mollis	Full Pot: C	3L	3/m²	10.126m²
46 -	AQU HYB	Aquilegia McKana Hybrids	Full Pot: C	3L	5/m²	9.0622m²
75 -	DIG ALB	Digitalis purpurea 'Alba'	Full Pot: C	3L	4/m²	18.221m²
7 -	LUP MAI	Lupinus 'Noble Maiden'	Full Pot: C	3L	2/m²	3.1243m²
13 -	RUD GOL	Rudbeckia fulgida sullivantii 'Goldsturm'	Full Pot: C	2L	3/m²	4.2545m²
10 -	SED BRI	Sedum spectabile 'Brilliant'	Full Pot: C	3L	3/m²	3.2989m²
Total :182 -						Total :48.0869m²

Ferns

Number	Abbreviation	Species	Specification	Pot Size	Density	Area
19 -	DRY KIN	Dryopteris affinis 'Cristata The King'	Full Pot: C	3L	2/m²	9.0644m²
44 -	DRY BAR	Dryopteris filix-mas 'Barnesii'	Full Pot: C	3L	2/m²	21.9702m²
28 -	DRY WAL	Dryopteris wallichiana	Full Pot: C	3L	2/m²	13.2404m²
						Total :44.275m²

Grasses

Number	Abbreviation	Species	Specification	Pot Size	Density	Area
38 -	MISSIFO	Miscanthus sinensis 'Ferner Osten'	Full Pot: C	3L	3/m²	12.3486m²
						Total :12.3486m²

Native Hedgerow Mix

Number	Abbreviation	Species	Specification	Height	Pot Size	Density	Percentage Contribution	Length
68 -	COR AVE	Corylus avellana	1+2: Transplant - seed raised: Branched: 3 brks: B	60-80cm		0.33Ctr Double Staggered at 0.3m offset	15%	11.0478m
180 -	CRA MON	Crataegus monogyna	1+1: Transplant - seed raised: B	60-80cm		0.33Ctr Double Staggered at 0.3m offset	40%	29.4608m
68 -	ILE AQU	Ilex aquifolium	Bushy: 3 brks: C	40-60cm	3L	0.33Ctr Double Staggered at 0.3m offset	15%	11.0478m
91 -	PRU SPI	Prunus spinosa	1+1: Transplant - seed raised: Branched: 2 brks: B	60-80cm		0.33Ctr Double Staggered at 0.3m offset	20%	14.7304m
24 -	ROS ARV	Rosa arvensis	1+1: Transplant - seed raised: Branched: 2 brks: B	60-80cm		0.33Ctr Double Staggered at 0.3m offset	5%	3.6826m
24 -	ROS CAN	Rosa canina	1+1: Transplant - seed raised: Branched: 3 brks: B	60-80cm		0.33Ctr Double Staggered at 0.3m offset	5%	3.6826m
Total :455 -								Total :73.652m

Native Shrub Mix

Number	Abbreviation	Species	Specification	Height	Pot Size	Density	Percentage Contribution	Area
95 -	ACE CAM	Acer campestre	1+1: Transplant - seed raised: Branched: 3 brks: B	60-80cm		1/m²	15%	89.6973m²
64 -	COR SAN	Cornus sanguinea	1+1: Transplant - seed raised: Branched: 3 brks: B	60-80cm		1/m²	10%	59.7981m²
95 -	COR AVE	Corylus avellana	1+2: Transplant - seed raised: Branched: 3 brks: B	60-80cm		1/m²	15%	89.6973m²
64 -	ILE AQU	Ilex aquifolium	Bushy: 3 brks: C	40-60cm	3L	1/m²	10%	59.7981m²
64 -	ROS ARV	Rosa arvensis	1+1: Transplant - seed raised: Branched: 3 brks: B	60-80cm		1/m²	10%	59.7981m²
123 -	ROS CAN	Rosa canina	1+1: Transplant - seed raised: Branched: 3 brks: B	60-80cm		1/m²	20%	119.5963m²
123 -	VIB OPU	Viburnum opulus	1+1: Transplant - seed raised: Branched: 3 brks: B	60-80cm		1/m²	20%	119.5963m²
Total :628 -								Total :597.9815m²

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CRODA EUROPE OFFICE, LEEK

DRAWING TITLE:
PLANTING PLAN (SHEET 2 of 2)

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