

Be.EV - RELIANCE STREET . MANCHESTER

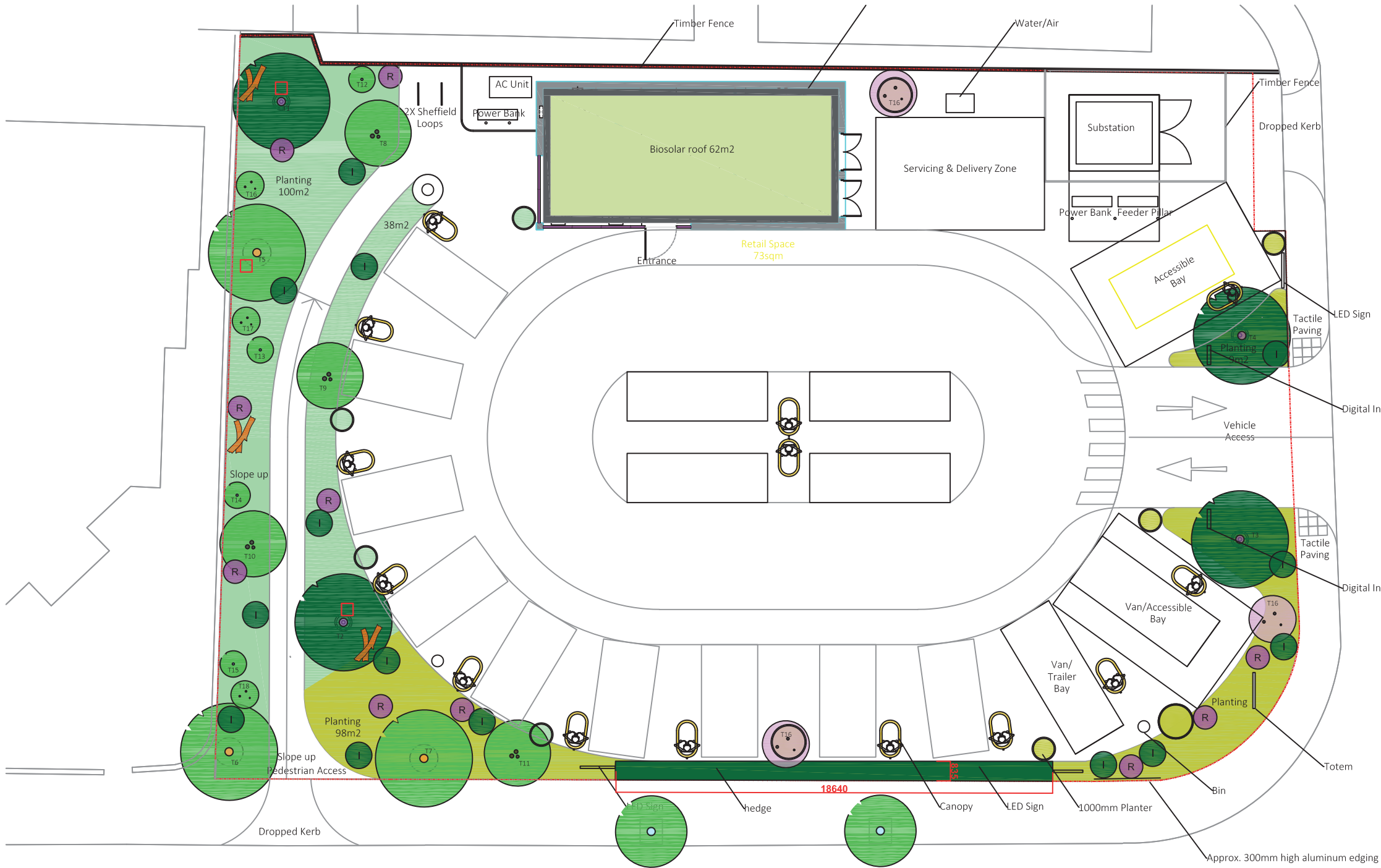
07 06 2024 REVISION F

PLANTING - UPDATED LAYOUT

FOR PLANNING

FFLO Landscape Architects

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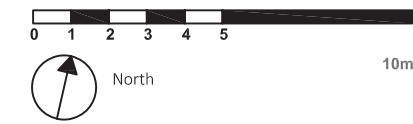


- refer to planting schedule
- Mix A 138m2 planted at 9 plants/m2
- Mix B 92m2 planted at 9 plants/m2
- Biosolar roof, 62m2 with 300mm gravel fire break (to architects details)
- Raised planter, 1m dia., 450mm H Mix A 3m2 planted at 9 plants/m2
- Raised planters, 3x1mdia., 3x1.5m dia., 450mm H Mix B 6.5m2 planted at 9 plants/m2
- Native mixed hedge 19Lm

TREES

ALL TREES TO BE SELECTED BY FFLO PRIOR TO ORDER

- Betula pubescens - SMALL T12 -T14 Size 2-3m H, 140-160mm girth Feathered
- Betula pubescens - SMALL T16-T18 Size 2-3m H Multistem
- Betula pubescens - MEDIUM T8-T11 Size 4-5m H Multistem
- Ilex aquifolium - various sizes, see schedule
- T5-7 Betula pubescens standard, 2m clear stems see schedule, to be selected by FFLO.
- T1-4 Pinus sylvestris standard, 2.5m clear stems see schedule, to be selected by FFLO.
- T18-19 Sorbus aucuparia standard, 2m clear stems see schedule, to be selected by FFLO.
- Malus sylvestris multistems, see schedule
- Rosa canina
- Deadwood for invertebrates,(see FFLO spec)
- Tree mounted bat / bird boxes, type to be determined.



NOTES:

To be read together with FFLO landscape spec and plant schedule

To fully understand the key please print in colour

In this project FFLO drawings should only be used in reference to soil type/depth and planting. For all other matters please refer to architects drawings

Plant mixes to be planted as a naturalistic tapestry. All plants per mix to be set out by the landscape architect, prior to any planting. This must be programmed into the installation.

Bulbs to be overplanted. If installation does not fit the season for bulb planting, potted bulbs must be used in place of bulbs. In this instance contractor must agree pot numbers / quantities with FFLO.

IMPORTANT NOTICE: Plant sourcing must be incorporated into the programme to ensure correct cultivars are procured. Substitutions should be a last resort and must be agreed with FFLO prior to order. Please send photos of multistems, shrubs and trees to FFLO for review and agreement prior to order.

Plants shall be first class examples of their species or variety, free from all pests and diseases, with good fibrous root systems and materially undamaged (refer to relevant sections of BS3936 Parts 1-4 'Specification of Nursery Stock').

Visual identity

The client Be.EV, working with Architect That have set out to create an electric car charging station with a visual identity defined by landscape as approved by Manchester City Council previously (app ref: 136359/FO/2023).

Sustainability

Electric car charging is an important step towards a more sustainable future. As such we must consider how the planting design can reinforce that step visually in real terms by bringing biodiversity and nature to the site.

Habitats are also for people

Alongside habitat creation we must also make a positive environment for people to sit and wait for their cars to be charged.

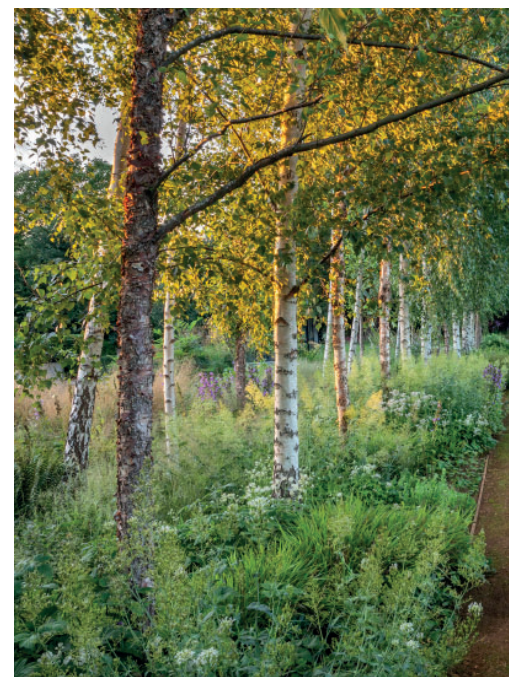
The Proposal

As a practice our interest is in extrapolating our designs from natural systems. By mirroring what is found in nature we provide biodiverse planting schemes with a soft natural feel. We think that natural habitats make good habitats for people too: the experience of nature is what makes people happy. The plants will be arranged on the matrix system developed by Nigel Dunnet at Sheffield University and will be set out in perosn by Claire Fernley, partner in the practice. The final setting out is quite critical to the success of the scheme in our opinion.

This approach is similar to the approach that we took at Exchange Square, Broadgate although that project has a more complex, high maintenance matirx. Notwithstanding the picture to the right is indicative of the general feel that we have in mind. A loose tapestry of naturalistic ground flora with an informal collection of trees above.



Naturalistic style planting by FFLO at exchange square broadgate. Planted as a tapestry mix the planting has an informal character



Naturalistic planting- a narrow belt of betula pubescens underplanted with woodland edge species: grasses, perennials and ferns similar to the palette we are proposing.

TREE PLANTING

There will be three larger *Pinus sylvestris*, chosen for their statuesque nature and evergreen structure. They are interspersed with a naturalistic grove of *Betula pubescens* of varying sizes, some as standard trees mixed with bifurcated and multistem specimens to create a naturalistic quality to the grove reminiscent of a woodland typology. Under this a small number of multistem crab apples will enhance the planting in early spring with blossom. Together the trees will create a soft, natural setting; offer shelter in winter and shade in summer.

Two *Sorbus aucuparia* will be planted as replacement to the existing street trees. They are suited to being an urban street tree as well as being native, offering berries for foraging birds and a naturalistic quality to compliment the planting of the site.



Betula pendula



Bifurcated Betula pubescens



Pinus sylvestris



Malus evereste multistem



Sorbus aucuparia

OLDHAM ROAD BOUNDARY TREATMENT

A native mixed hedge will be planted along the boundary to Oldham Road to provide enclosure from the busy road and a more robust edge to the site. The mix of native species will also contribute significantly to biodiversity on the site.

Native mixed instant hedging, 1.2m high.

- Hawthorn (*Crataegus monogyna*),
- Field Maple (*Acer campestre*)
- Hazel (*Corylus avellana*)
- Dogwood (*Cornus alba*)
- Hornbeam (*Carpinus betulus*)
- Blackthorn (*Prunus spinosa*)



BIOSOLAR ROOF

A wildflower flower mat by Bauder or similar will be laid on the roof of the cafe in combination with PV panels. The adjacent table from Bauder shows the typical buildup required.

The blanket includes up to 40 varieties of British native wildflowers with less than 10% grass species. It is RHS Certified perfect for pollinators.



	Function	Product name	Thickness (mm)	Weight (kg/m2)
1	Vegetation	BauderGREEN WB	30	30
2	Substrate	BauderGREEN SUB-BM UK	100	120
3	Filtration layer	BauderGREEN FV 125 100	1	0.13
4	Drainage layer	BauderGREEN DSE 40	40	15.3 (saturated)
5	Protection layer	BauderGREEN FSM 600	4	3.6
Green roof system build-up			175	169
6	Bauder Waterproofing	Options for Bituminous membrane, Hot Melt, Single ply or Cold applied liquid systems.	Not included	Not included
In-depth and up-to-date product specific technical data is available for each element within a system. Download from our technical-centre				

Native Wildflower Blanket Green Roof Buildup

GROUND FLORA - SUNNY MIX

The planting at the perimeter of the site will provide a naturalistic surround to the station. It will be formed of a rich tapestry of flowering species and ornamental grasses. An additional layer of larger shrubs and multistem plants will create structure and body to the planting.

- Deschampsia cespitosa,
- Briza media,
- Digitalis purpurea,
- Daucus carota,
- Knautia arvensis,
- Red campion,
- Stachys officianalis,
- Galium mollugo,
- Leucanthemum vulgare,
- Sesleria autumnalis,
- Hycinthoides non scripta,
- Knautia arvensis,
- Lunaria annua,
- Centaurea nigra,
- Anthriscus sylvestris Ravemswing,
- Primula vulgaris, Silene dioica,
- Valeriana officinalis,
- Euphorbia blue haze,
- Primula elatior,
- Galium verum,
- Dianthus carthusianorum,
- Stipa gigantea,
- Aquilegia vulgaris,
- Ranunculus acris citrinus,
- Gladiolus byzantinus
- Verbena bonariensis
- Salvia caradonna
- Lonicera nitida



UNDERSTOREY - SHADIER MIX

The Birch trees will be underplanted with a mix of grasses, ferns and flowering perennials. The ornamental grasses and ferns will hold interest and cover through the winter months and flowering perennials will bring colour and structure through summer.

This rich species selection, with a number of native and pollinator plants will create a more biodiverse habitat. A number of small shrubs and evergreen shrubs will be included amongst the mix to give further structure and year round interest.

- Deschampsia cespitosa,
- Briza media,
- Digitalis purpurea,
- Daucus carota,
- Galium mollugo,
- Leucanthemum vulgare,
- Sesleria autumnalis,
- Hycinthoides non scripta,
- Lunaria annua,
- Anthriscus sylvestris Ravenswing,
- Primula vulgaris, Silene dioica,
- Primula elatior,
- Aquilegia vulgaris,
- Ranunculus acris citrinus,
- Blechnum spicant,
- Polystichum munitum,
- Campanula rotundifolia.
- Lonicera nitida Tidy Tips
- Viburnum opulus



B.Ev RELIANCE STREET, MANCHESTER, updated layout
Planting schedule 07.06.2024 Revision C
FOR PLANNING
FFLO . www.fflo.co.uk . Tel: +44 (0)1892 512 669 email: claire@fflo.co.uk/james@fflo.co.uk

Any substitutions must be agreed with FFLO prior to order.
Please send photos of multistems and fruit trees to FFLO for review prior to order.

Plants to be set out as a random matrix across the roof to give a naturalistic appearance.
Planting to be topdressed with a 45mm layer of fine bark mulch.

	SPECIES	%	QUANTITY	SIZE
	Trees			
T1-T4	Pinus sylvestris - clear stem		4	as selected and specified by FFLO, 2.5m clear stem
T5-T7	Betula pubescens - large - clear stem		3	6m H, 2m clear stem, standard, 200-250mm girth
T8-T11	Betula pubescens - medium - bifurcated		4	4-5mH multistem
T12-T15	Betula pubescens - small - clear stem		4	2-3mH feathered, 140-160mm girth
T16-T18	Betula pubescens - small - bifurcated		3	2-3mH multistem
T19-T20	Sorbus aucuparia - large - clear stem		2	6m H, 2m clear stem, standard, 200-250mm girth
	Malus sylvestris - multistem		3	2-3mH multistem
	Shrubs			
	Ilex aquifolium		14	1.5mH bushy with good branching structure and dense foliage
	Rosa canina		10	20ltr
	Native mixed hedge		15 lm	instant hedge 1m high, must be dense and bushy, mature enough to provide a solid hedge the full depth of the 830mm width. A double/triple layer of hedge may be necessary.

BIOSOLAR ROOF 62m2
BauderGREEN WB Wildflower Blanket System: FOR MORE INFORMATION VISIT THE LINK BELOW
chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://www.bauder.co.uk/technical-centre/downloads/system-summaries/wildflower-blanket.pdf

<u>GROUNDFLORA PLANT MIX A - SHADIER MIX 141m2</u>				
9 Plants per m2,		total number of plants =		1269
Grasses & Ferns				
	Deschampsia cespitosa	5	63	
	Briza media	7	89	
	Sesleria autumnalis	13	165	
	Blechnum spicant	8	102	
	Polystichum munitum	8	102	
Perennials				
	Telima grandiflora	5	63	
	Digitalis purpurea	5	63	
seedheads	Daucus carota	5	63	
	Knautia arvensis	4	51	
seedheads	Silene diocia	4	51	
seedheads	Stachys officianalis	4	51	
	Galium mollugo	3	38	
	Leucanthemum vulgare	4	51	
	Campanula rotundifolia	3	38	
	Lunaria annua	3	38	
	Anthriscus sylvestris Ravenswing	3	38	
	Primula vulgaris	4	51	
	Primula elatior	4	51	
	Aquilegia vulgaris	4	51	
	Ranunculus acris citrinus	4	51	
		100	1269	
spring colour Hycinthoides non scripta		bulb	750	planted throughout mix A in groups/swathes of 50-70.
Galanthus nivalis		bulb	1500	planted throughout mix A in groups/swathes of 100-150.

	SPECIES	%	QUANTITY	SIZE
GROUNDFLORA PLANT MIX B - SUNNIER MIX 99m2				
9 Plants per m2,		total number of plants =	891	
	Grasses & Ferns			
	Deschampsia cespitosa	5	45	
	Briza media	3	27	
	Sesleria autumnalis	13	116	
	Blechnum spicant	8	71	
	Polystichum munitum	8	71	
	Stipa gigantea	1	9	
	Perennials			
	Telima grandiflora	4	36	
	Digitalis purpurea	4	36	
seedheads	Daucus carota	2	18	
	Knautia arvensis	3	27	
seedheads	Silene diocia	3	27	
seedheads	Stachys officianalis	4	36	
	Galium mollugo	2	18	
	Leucanthemum vulgare	3	27	
	Campanula rotundifolia	3	27	
seedheads	Lunaria annua	3	27	
	Anthriscus sylvestris Ravemswing	3	27	
spring colour	Primula vulgaris	4	36	
spring colour	Primula elatior	4	36	
	Aquilegia vulgaris	3	27	
	Ranunculus acris citrinus	4	36	
seedheads	Centaurea nigra	3	27	
	Euphorbia blue haze	4	36	
	Galium verum	2	18	
	Dianthus carthusianorum	4	36	
		100	891	
spring colour	Hycinthoides non scripta	bulb	350	planted throughout mix B in groups/swathes of 50-70.
	Gladiolus byzantinus	bulb	200	dot throughout in groups of 3, 5 and 7
spring colour	Galanthus nivalis	bulb	1500	planted throughout mix A in groups/swathes of 100-150.