

12th September 2022

Our Ref: 9082.014



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PLANNING | DESIGN | ENVIRONMENT

Dear Nick,

MEADOWSIDE, MANCHESTER- BAT & BIRD BOX SCHEME

TEP was commissioned by Far East Consortium (FEC) (hereafter referred to as 'the client') in September 2022 to produce a bat and bird mitigation strategy in association with development works to be carried out at the Meadowside site in central Manchester (hereafter referred to as 'the site').

The site was granted planning permission in 2017 (116366/FO/2017) for consent for the erection of four residential buildings to form 756 residential apartments together with ground floor commercial uses with associated parking, landscaping, amenity areas and creation of public realm. A planning application was submitted, and granted, in 2019 for variation of planning condition 3 of planning permission 116366/FO/2017 to increase the height of buildings at plots 2, 3, 4 and 5 and amendments to façade treatments. Planning condition 59 for the full planning permission for the FEC development at Meadowside (124120/JO/2019) states:

"59) Prior to the first occupation of each phase, details of bird and bat boxes to be provided (including location and specification) shall be submitted for approval in writing by the City Council, as Local Planning Authority in that phase. The approved details shall then be implemented within a timescale to be agreed in writing with the City Council, as Local Planning Authority."

Phlorum Ltd undertook the original Phase 1 Habitat Survey of the site (Report Ref: 6785.NOMA.PreEcoApp.Revised, 2017) and identified the scattered trees and scrub habitats of Area 4 and, to a lesser degree, the introduced shrub of Area 2 to provide suitable habitat for nesting birds, however the presence of more optimal habitat within the wider surrounds reduces the likelihood that this species group would utilise the site in numbers. The site offered negligible roosting suitability for bats, with the exception of Building B3 in Area 4 (Figure 1: Angel Meadows Habitat Survey Map, Phlorum Ltd).

To compensate for the loss of habitat features it is proposed that 10 bat and bird boxes (5 of each) are installed in suitably retained habitat. The site itself is not ideally suited to installing bat and bird boxes due to the lack of mature trees in the post-development landscape, and hence mature trees located in the adjacent Angel Meadows Park is considered a suitable



Gold

alternative. These alternative locations provide a greater opportunity for successful uptake by bats and birds.

Examples of suppliers that stock the boxes recommended below include:

- <https://www.nhbs.com/>
- <https://www.wildcare.co.uk/>
- <https://shopping.rspb.org.uk/>

Bats

The provision of bat boxes have been chosen to suit the assemblage of bats identified as present within the site and surrounding area. The general-purpose bat box is designed to suit crevice and cavity dwelling species such as common pipistrelle, soprano pipistrelle, brown-long eared bat and noctule bat. A total of x5 General Purpose bat boxes are recommended.

Bat Box for Trees	
General Purpose Bat Box The General Purpose Wood Concrete Bat Box is a tree mounted bat box designed to suit crevice and cavity dwelling bat species in the UK. It is constructed from wood concrete which is a mix of wood fibres and concrete which makes the box very durable and long-lasting. This material is also breathable reducing the risk of condensation issues within the box and offering a more thermally stable climate for roosting bats. It features two entrances, one on the bottom of the box which allows bats to crawl into the box from a tree, and one on the front which offers a clear flight path for bats. The entrance hole on the base of the box also allows the box to be self cleaning, reducing the maintenance required. The internal chamber is divided into two chambers, which can help with excluding small predators, and it features a domed roof to allow bats to form roosting clusters for warmth. The box is supplied with a galvanised steel hanger to aid with mounting the box onto a tree.	

Birds

The provision of bird boxes have been chosen to suit the assemblage of birds identified as present within the site and surrounding area. A total of x2 1B Schwegler Nest Box (32mm entrance hole), x1 Vivara Pro Barcelona WoodStone Open Nest Box and x2 Vivara Pro WoodStone Starling Nest Box are recommended.

Bird Boxes for Trees

1B Schwegler Nest Box (32mm entrance hole)

This box has been designed as a summer These Woodcrete nest boxes are famous for their durability - lasting for at least 20-25 years. Woodcrete is a breathable blend of wood, concrete and clay which will not rot, leak, crack or warp, whilst preventing condensation and maintaining more constant temperatures inside than wooden boxes. They are carefully designed to provide a stable environment and to mimic natural nest and roost sites with internal brood chamber dimensions that are similar to natural woodpecker cavities. Schwegler have a patented method of installation on trees that prevents the tree trunk from growing over the hanger from which the box is suspended. 32mm entrance hole will attract Great, Blue, Marsh, Coal and Crested Tit, Redstart, Nuthatch, Collared and Pied Flycatcher, Wryneck, Tree and House Sparrow.



Vivara Pro Barcelona WoodStone Open Nest Box

These nestboxes are manufactured from WoodStone which is a mix of concrete and FSC certified wood fibres. Unlike a traditional wooden nest box, these boxes will not rot away or deteriorate and are guaranteed for 10 years. This robust material safeguards against attacks from predators such as woodpeckers, cats and squirrels, whilst also providing a well insulated interior with a more consistent internal temperature than an ordinary wooden box. This is especially important during the breeding season and ensures that young birds have a greater chance of survival. Nesting sites have become rare for cavity nesting birds due to changes in woodland management practices, so you can provide much-needed space for rearing chicks and birds that are roosting overwinter with these durable, long-lasting nest boxes. These open nest boxes are suitable for wrens, robins, spotted flycatchers, pied and grey wagtails, song thrushes and blackbirds.



Vivara Pro WoodStone Starling Nest Box

Starlings spend the whole year in the UK with more arriving to over-winter here. Starlings are a Red List species due to their decline in recent years both in the UK and over much of Northern Europe. A reduction in natural cavities and changes to building construction mean that Starling nesting sites have become rare so providing new nesting sites is a great way to help this species. Starlings are gregarious birds and prefer to nest in colonies, so grouping several boxes together will encourage occupancy. This nest box is manufactured from WoodStone, a mixture of concrete and FSC Certified wood fibres. This durable material is very resistant to rot and also



provides increased thermal insulation and protection from predators. WoodStone is also breathable, ensuring that the nesting chamber maintains the optimum temperature and humidity levels. The WoodStone Starling Box is covered by a 10 year guarantee.	
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Siting of Bat & Bird Boxes

Approval will be sought from Manchester City Council (MCC) and MCC Environmental team on the proposal to site bat and bird boxes within Angel Meadow Park. Siting of the bat and bird boxes, once approval is obtained from MCC, should be designed by an ecologist. Failure to do so may result in boxes being sited in sub-optimal positions that could lead to a lower take-up by bats and birds.

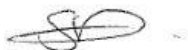
Bird boxes should be sited with the hole facing between north and east and bat boxes should face between south and west. Proximity to suitable commuting and foraging habitat for bats and birds has also been considered during the siting process.

All bat and bird boxes must be installed in line with the manufacturer's specifications to ensure no hazard is posed to members of the public. It is recommended that new bat and bird boxes are installed during autumn and winter to ensure they are ready for use the following breeding season.

Bat boxes must be installed at heights of between 3m and above. Bat boxes should be sited on south and west facing walls where no direct artificial light will shine on the box. It must be ensured that there is unobstructed access for bats entering and leaving the bat box.

Bird boxes must be installed 2 metres or more above ground level. It must be ensured that there is unobstructed access for birds entering and leaving the bird box. Bird boxes should be placed on north and east facing aspects.

Yours sincerely,
Stephanie Davies



Senior Ecologist
TEP

Enc:

Figure 1: Angel Meadows Habitat Survey Map, Phlorum Ltd
Softworks PL1691-GA-P102, 02, Planit-ie LLP

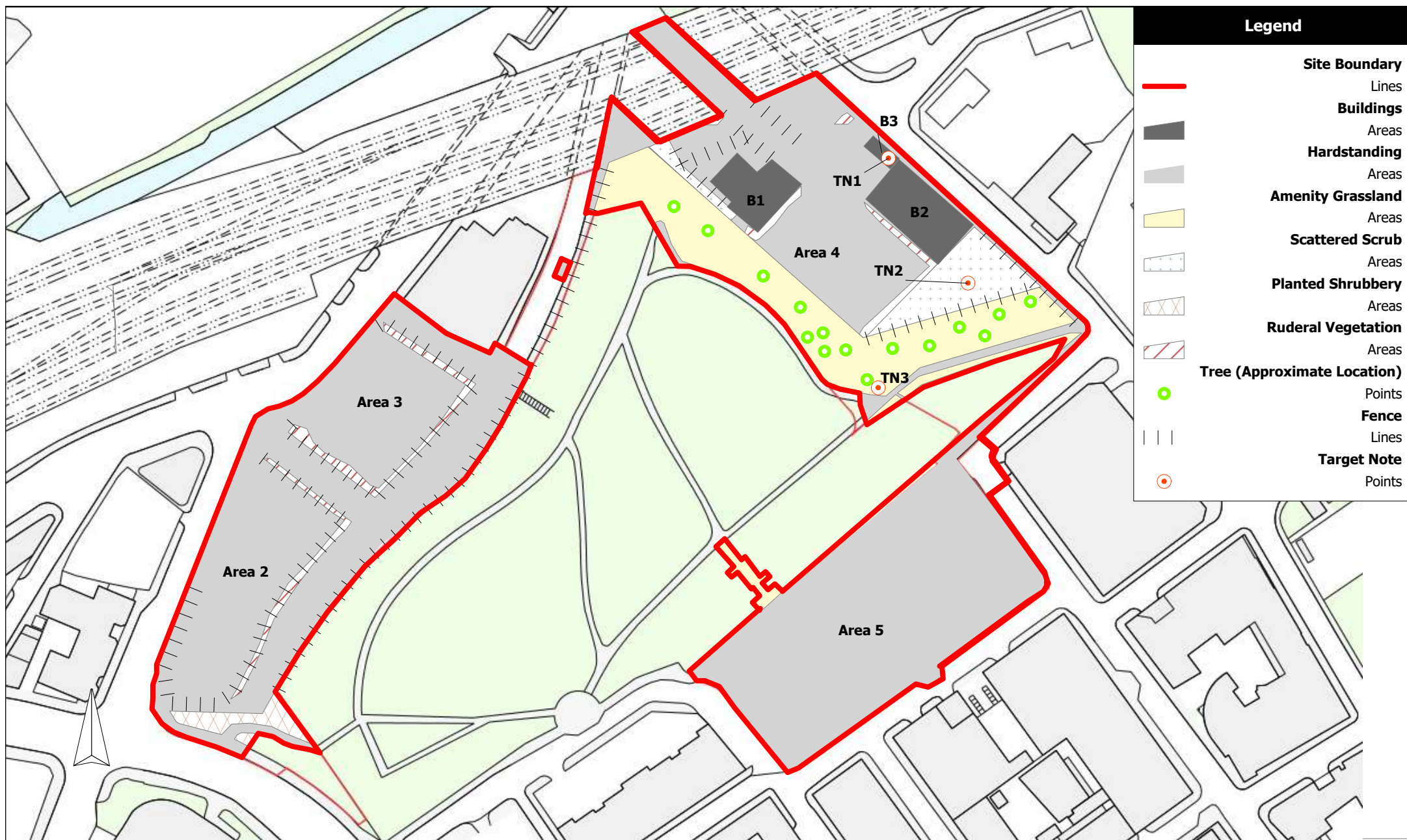


Figure 1: Angel Meadows Habitat Survey Map

Drawn by: TF
 On the: 26-Apr-17
 Not to Scale
 Ref: 6785



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Code	Species	Common Name	Height	Girth / Size	Habit/Form	Density	Number
NOTE: All trees must be tagged by Landscape Architect prior to delivery to site.							
TREE PLANTING EVERGREEN							
PnA	Pinus nigra Austriaca	Austrian Pine	min 600cm	RB	Semi mature specimen, dense uniform canopy, 2m clear stem, underground guyed, 4-6x transplanted	as shown	8
PnA	Pinus nigra Austriaca	Austrian Pine	min 450cm	RB	Semi mature specimen, dense uniform canopy, 2m clear stem, underground guyed, 4-6x transplanted	as shown	3
TREE PLANTING DECIDUOUS							
Semi-mature							
Pt	Paulownia tomentosa	Empress Tree	500-550cm	40-45cm RB	Semi mature, 2m clear stem, underground guyed, 4-6x transplanted	as shown	2
Qp	Quercus palustris	Pin Oak	500-550cm	40-45cm RB	Semi mature, 2m clear stem, underground guyed, 4-6x transplanted	as shown	7
POd	Platanus orientalis 'Digitata'	Oriental Plane	500-550cm	40-45cm RB	Semi mature, 2m clear stem, underground guyed, 4-6x transplanted	as shown	2
As	Alnus spaethii	Spaeth Alder	500-550cm	40-45cm RB	Semi mature, 2m clear stem, underground guyed, 4-6x transplanted	as shown	2
BaF	Betula albosinensis Fascination	Chinese Red Birch	500-550cm	40-45cm RB	Semi mature, 2m clear stem, underground guyed, 4-6x transplanted	as shown	1
PA	Prunus 'Accolade'	Accolade Cherry	500-550cm	40-45cm RB	Semi mature, 2m clear stem, underground guyed, 4-6x transplanted	as shown	1
Mk	Magnolia Kobus	Northern Japanese Magnolia	500-550cm	30-35cm RB	Semi mature, 2m clear stem, underground guyed, 4-6x transplanted	as shown	13
Ls	Liquidambar styraciflua	Sweet Gum	500-550cm	30-35cm RB	Semi mature, 2m clear stem, underground guyed, 4-6x transplanted	as shown	10
BaF	Betula albosinensis Fascination	Chinese Red Birch	500-550cm	30-35cm RB	Semi mature, 2m clear stem, underground guyed, 4-6x transplanted	as shown	4
PA	Prunus 'Accolade'	Accolade Cherry	500-550cm	30-35cm RB	Semi mature, 2m clear stem, underground guyed, 4-6x transplanted	as shown	2
Multi-stem							
ARH	Amelanchier grandiflora 'Robin Hill'	Apple serviceberry 'Robin Hill'	400-450cm	RB	Multistem specimen, 4x transplanted, min 3 strong stems, umbrellas pruned	as shown	8
Pp	Parrisia persica	Persian Ironwood	400-450cm	RB	Multistem specimen, 4x transplanted, min 3 strong stems, umbrellas pruned	as shown	4
Au	Arbutus unedo	Strawberry Tree	400-450cm	RB	Multistem specimen, 4x transplanted, min 3 strong stems, umbrellas pruned	as shown	1
Existing Park Trees (lifted and replanted within new scheme)							
PnA	Pinus nigra Austriaca	Austrian Pine	N/A	N/A	N/A	as shown	3
Mg	Melaleuca gypsochromoides	Dawn Redwood	N/A	N/A	N/A	as shown	3
HEDGE PLANTING							
All hedging planted with integrated post and wire fence as shown on softworks detail drawings.							
Code	Species	Common Name	Height	Girth / Size	Habit/Form	Density	Number
Tb	Taxus baccata	Yew	1.2-1.5m	RB	Dense instant hedging plants	single row	as shown

SHRUB AND HERBACEOUS PLANTING							
Planting mix and layout subject to further development as part of detailed design stage							
	Achillea 'Moonshine'	30-40cm	3L CG	Full Pot		3ltr @ 9lm2	
	Achillea 'Fornett Ivory'	30-40cm	3L CG	Full Pot		3ltr @ 9lm2	
	Acanthus mollis	30-40cm	3L CG	Full Pot		5ltr @ 5lm2	
	Alchemilla mollis	30-40cm	3L CG	Full Pot		3ltr @ 9lm2	
	Asagatthe 'Blackadder'	30-40cm	3L CG	Full Pot		3ltr @ 9lm2	
	Agapanthus africanus 'Albus'	30-40cm	3L CG	Full Pot		5ltr @ 5lm2	
	Anemone nemorosa	30-40cm	3L CG	Full Pot		3ltr @ 11lm2	
	Calamagrostis acutiflora 'Karl Foerster'	30-40cm	3L CG	Full Pot		3ltr @ 9lm2	
	Calamagrostis acutiflora 'Overdam'	30-40cm	3L CG	Full Pot		3ltr @ 9lm2	
	Deschampsia cespitosa	30-40cm	3L CG	Full Pot		3ltr @ 11lm2	
	Dianthus carthusianorum	30-40cm	3L CG	Full Pot		5ltr @ 5lm2	
	Echinacea purpurea 'White Swan'	30-40cm	3L CG	Full Pot		3ltr @ 9lm2	
	Euphorbia characias	30-40cm	3L CG	Full Pot		5ltr @ 5lm2	
	Gymnocarpium dryopteris	30-40cm	3L CG	Full Pot		5ltr @ 5lm2	
	Heliotrichon sempervirens	30-40cm	3L CG	Full Pot		3ltr @ 9lm2	
	Luzula nivea	30-40cm	3L CG	Full Pot		3ltr @ 12lm2	
	Molinia caerulea 'Moorheze'	30-40cm	3L CG	Full Pot		3ltr @ 9lm2	
	Miscanthus sinensis 'Kleine Fontaine'	30-40cm	3L CG	Full Pot		3ltr @ 9lm2	
	Osmunda regalis	30-40cm	3L CG	Full Pot		5ltr @ 5lm2	
	Perovskia 'Blue Spire'	30-40cm	3L CG	Full Pot		5ltr @ 5lm2	
	Perovskia 'Little Spire'	30-40cm	3L CG	Full Pot		5ltr @ 5lm2	
	Pinus mugo 'Mops'	30-40cm	3L CG	Full Pot		5ltr @ 5lm2	
	Polystichum aculeatum	30-40cm	3L CG	Full Pot		5ltr @ 5lm2	
	Polystichum montanum	30-40cm	3L CG	Full Pot		5ltr @ 5lm2	
	Polystichum setiferum	30-40cm	3L CG	Full Pot		5ltr @ 5lm2	
	Rudbeckia hultei	30-40cm	3L CG	Full Pot		3ltr @ 9lm2	
	Solidago rupeosa 'Fireworks'	30-40cm	3L CG	Full Pot		3ltr @ 9lm2	
	Stipa gigantea	30-40cm	3L CG	Full Pot		3ltr @ 9lm2	
	Stipa tenuissima	30-40cm	3L CG	Full Pot		3ltr @ 11lm2	
	Tiarella cordifolia 'Spring Symphony'	30-40cm	3L CG	Full Pot		3ltr @ 12lm2	
	Verbena bonariensis	30-40cm	3L CG	Full Pot		5ltr @ 5lm2	
	Veronicastrum virginicum 'Lavendelturm'	30-40cm	3L CG	Full Pot		3ltr @ 9lm2	

NOTE: Existing trees to be relocated within Angel Meadow Park as shown on Tree Retention & Removal drawing. Locations to be agreed with Manchester City Council and Friends of Angel Meadows.

KEY

Application Boundary

TS
Terrace Seating To Terrace at the Arches / Gould Street
Concrete structure with Granite Cladding
and Timber Seating Tops

SOFT LANDSCAPE

Existing trees to be retained
Refer to Tree Retention and Removal Drawing

Tree Planting: Specimen and Semi-mature Tree Planting
Refer to Softworks Drawing and Schedule for full details.
Trees in hard to have tree profiles and urban tree soil.
Replacements to be installed wherever tree planting is in
proximity to underground services.

Shrub and Herbaceous Planting Areas:
Refer to Softworks Drawing and Schedule for full details.

Shrub and Herbaceous Planting Areas:
Refer to Softworks Drawing and Schedule for full details.

Existing Lawn Areas:
To be made good with new turf as required around newly
installed hardworks.

01	21/10/19	Building amended and notes added	TF	MS
00	09/05/17	for Section T3 application		
Issue		Date	Status	Drawn/ Apprvd.
			MS	KR

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Client	FEC and The Co-op		
Project	Plots 2, 3, 4 and 5, Angel Meadow		
Drg Title	Softworks		
Created on	Created by	Approved by	
06-02-17	SS	KR	
Scale	Size	Status	
1:500	A1	Planning	
Drg No.	PL1691-GA-P102		Issue 02