

Ecology Technical Note: Condition 20, Axis J9, Bicester (Ref 10706 R01 Biodiversity Enhancements Tech Note Condition 20 GS)

Date Issued: 16/08/2023

Background/Context

Tyler Grange Group Ltd were commissioned Quod to provide ecological services in relation to a planning application at Axis J9, Phase 3 (Grid Reference: SP 56480 23271), hereinafter referred to as 'the site'.

A planning application for the construction 5 units within 3 buildings and associated parking and servicing, landscaping and associated works was granted permission by The Planning inspectorate (appeal application number APP/C3105/W/22/3304021) in January 2023 subject to several conditions.

This technical note aims to discharge condition 20. Full details of the condition are provided below as per the appeal decision notice for the site:

- **Condition 20:** *Full details of the proposals to provide a biodiversity net gain of 5.5% and enhance biodiversity as referred to within paragraphs 10.6.30, 10.6.31 and 10.6.32 of the Environmental Statement including the position and type of each proposed enhancement measure shall be submitted to and approved in writing by the Local Planning Authority prior to the development reaching slab level. Thereafter, the biodiversity enhancement measures approved shall be carried out prior to occupation and retained in accordance with the approved details.*

This tech note provides details of the biodiversity net gain and other ecological enhancements which were detailed in the Environmental Statement, and has the following objectives:

- **Objective 1 – Provide +5.5% biodiversity net gain**
- **Objective 2 – Enhance biodiversity as referred to within 10.6.30, - 10.6.32 of the ES including the position and type of each proposed enhancement measure.**

The responsibility for ensuring all recommendations are carried out in line with this technical note lie with the appointed contractor for the works. Overall control will be help by the contractors site manager.



OBJECTIVE 1: Biodiversity Net Gain Detail

Habitats and Biodiversity Net Gain

Biodiversity Net Gain has been assessed using Warwickshire Coventry and Solihull - Biodiversity Impact Assessment Calculator v. 18.3 (08/08/2014).

Existing habitats

The site prior to development was dominated by an arable field, other habitats included the field boundaries associated with the hedgerows and a section of footpath. Hedges with trees were also present on site and were of a moderate-high distinctiveness and moderate condition, ditches (which were dry at time of survey in 2016) were also present.

In total the **existing habitat areas** on site had a biodiversity value of **41.29 Habitat Impact Score (HIS)** and the **existing linear habitats** on site had a value of **9.44 Linear Impact Score (LIS)**. 50.73

Full details of habitats and condition assessments are provided in the appended excel calculator (Appendix 1).

Proposed Habitats

The proposed habitats on site include wildflower grassland, wetland vegetation (swales), woodland planting, scattered trees, dense scrub, wet grassland, meadow grassland, and native species rich hedgerows as well as enhanced field margins and hedgerows.

In total the created habitats and enhanced habitats on site will provide a **habitat mitigation score (HMS) of 43.04 habitat units** which will gain of **+2.35 units** from the baseline existing habitats. The **Linear Mitigation Score (LIS) will be 10.85** which would provide an uplift of **+1.41 units**. 53.89

The overall change from existing habitats to proposed habitats equates to a +5.7% increase in habitat score and 14.9% in linear score.

OBJECTIVE 2: Biodiversity Enhancements

The proposed enhancement measures are set out below (Landscape Plan, Appendix 2).

Habitat enhancements being provided:

- **Amphibians** – new and enhanced field margins, hedgerows and wildflower grassland will improve the terrestrial habitat provision and the two new swales will provide aquatic habitat for this species group. Overall based on the landscaping plans for the site there will be an uplift in value for amphibians and in particular great crested newts.
- **Bats** – no habitats of value to commuting, foraging or roosting bats will be impacted by the development. There will however be an uplift in habitats for the species in the form of the



swale, grassland buffers, and improved management of existing hedgerows. Lighting on site will also comply with best practice guidelines ([Guidance Note 8 Bat and Artificial Lighting](#)).

Bird Boxes

Bird boxes will be erected on the northern and eastern elevations of the northern building (see 10706/Bio enhancement Plan for specific installation locations) following manufacturers specification with the entrances facing between north and east to avoid the strongest sunlight and wettest winds and to be placed 3-6m off the ground. The box entrances will have a clear unobstructed flight path to ensure safe access/egress.

The bird boxes proposed include provision for [species of conservation concern](#) kestrel, flycatchers, house sparrows, and redstarts all of which are listed as either red or amber Birds of Conservation Concern 5th addition which assess the status of UK bird populations. The following boxes are recommended

- **1 x 2TF Schwegler Kestrel Nest Box (or similar)**
- **4 x 1MR Schwegler Avianex (or similar)**

The specified bird boxes are made from materials that are rugged and long-lasting and thus require minimal maintenance. The boxes should be cleaned out once per year during the winter months when nesting birds are not present (October to February).

Bat Boxes

Bat boxes will be positioned on the western elevations of the new warehouse (see 10706/Bio enhancement Plan for specific installation locations) to provide the maximum amount of daylight exposure to generate heat. The proposed bat boxes are designed to benefit a range of bat species associated with urban areas that are likely to roost in buildings. The box entrances will have a clear unobstructed flight path to ensure safe access/egress.

- **3 x Eco Kent Bat Box (or similar).**

The bat boxes recommended are suitable for soprano pipistrelle bats which listed as species of principal importance (NERC Act 2006)

The bat boxes will be positioned at a height that aims to minimise potential predation risks (3 to 8m). The specific bat box model recommended above has been designed to require no cleaning or maintenance.

Conclusion

The above measures have been designed to provide an improvement to the existing biodiversity value of the site. The proposed landscape planting including swales, field margins, wildflower grassland and hedgerows are of known benefit to wildlife, including amphibians, bats, and birds. The proposed bird and bat boxes also offer additional nesting and roosting opportunities for these



species groups. The proposed measures are in-line with the approved Environmental Statement and provide an uplift of habitat value of >5.5%.



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Plans

10706 – Biodiversity Enhancement Plan -

Tyler Grange Group Limited.

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Birmingham | Bristol | Cotswolds | Exeter | London | Manchester



-  Redline Boundary
- Biodiversity Enhancement Plan**
-  Bat Box
-  Bird Box
-  Kestrel Box



Project Middleton, Stoney Road, Bicester
 Drawing Title Bioenhancement Plan
 Scale As Shown (Approximate)
 Drawing No. 10706
 Date 2023/14/06
 Checked GS



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Appendix

Appendix 1: - Biodiversity Impact Assessment Calculator v. 18.3

Appendix 2: Landscape Plan - Planting Strategy (Re-form Landscape Architects,2023)

Warwickshire Coventry and Solihull - Biodiversity Impact Assessment Calculator

v. 18.3 08/08/2014
 Amendment from v18.2 only affects green roofs, for c
 Please fill in both tables

KEY	
	No action required
	Enter value
	Drop-down menu
	Calculation
	Automatic lookup
	Result

Local Planning Authority:	Cherwell District Council
Site name:	Axis J9 Phase 3
Planning application reference number:	
Assessor:	Aaron Grainger
Date:	10/07/2023

Please do not edit the formulae or structure
 To condense the form for display hide vacant rows, do not delete them
 If additional rows are required, or to provide feedback on the calculator please contact WCC Ecological Services

Existing habitats on site Please enter <u>all</u> habitats within the site boundary				Habitat distinctiveness		Habitat condition		Habitat Biodiversity Value							
T. Note	code	Phase 1 habitat description	Habitat area (ha)	Distinctiveness	Score	Condition	Score	Area (ha)	Existing value	Area (ha)	Existing value	Area (ha)	Existing value		
Direct Impacts and retained habitats								C	A x B x C = D	E	A x B x E = F	G	A x B x G = H		
Arable F	J11	Other: Arable	19.79	Low	2	Poor	1					19.79	39.58		
Field Ma	C31	Other: Tall ruderal	0.57	Medium-Low	3	Poor	1			0.20	0.60	0.37	1.11		
Road/pa	n/a	Built Environment: Buildings/hardstanding	1.00	none	0	Poor	1					1.00	0.00		
Total			21.36					Total	0.00	0.00	0.20	0.60	21.16	40.69	
												Site habitat biodiversity value		ΣD + ΣF + ΣH	41.29
Indirect Negative Impacts Including off site habitats								Value of loss from indirect impacts K x A x B = Li, Lii Li - Lii							
Before/after impact			K												
Before															
After															
Before															
After															
Before															
After															
Before															
After															
Total			0.00					M	0.00						
												Habitat Impact Score (HIS)		HIS = J + M	40.69

Biodiversity Impact Assessment Summary

Site name:	Axis J9 Phase 3
Planning reference number:	

Habitats	Area (ha)	Habitat Biodiversity Value
Total existing area onsite	21.36	41.29
Habitats negatively impacted by development		
Habitat Impact Score	21.16	40.69
On site habitat mitigation Habitat		
Mitigation Score	21.36	43.00
Habitat Biodiversity Impact Score		
If -ve further compensation required		2.31
Percentage of biodiversity impact		
Linear features	Length (km)	Linear Biodiversity Value
Total existing length onsite	3.72	26.64
Linear features negatively impacted by development		
Linear Impact Score	1.44	9.44
On site linear mitigation Linear		
Mitigation Score	2.13	10.85
Linear Biodiversity Impact Score		
If -ve further compensation required		1.41
Percentage of linear biodiversity impact		

CAUTION - Destruction of habitats of high distinctiveness, e.g. lowland meadow, ancient woodland or species-rich hedgerows, may be against local policy. Has the mitigation hierarchy been followed, can impact to these habitats be avoided? Any unavoidable loss of habitats of high distinctiveness must be replaced like-for-

For any questions with regard to biodiversity impact and this development please contact Warwickshire County Council Ecological Services:

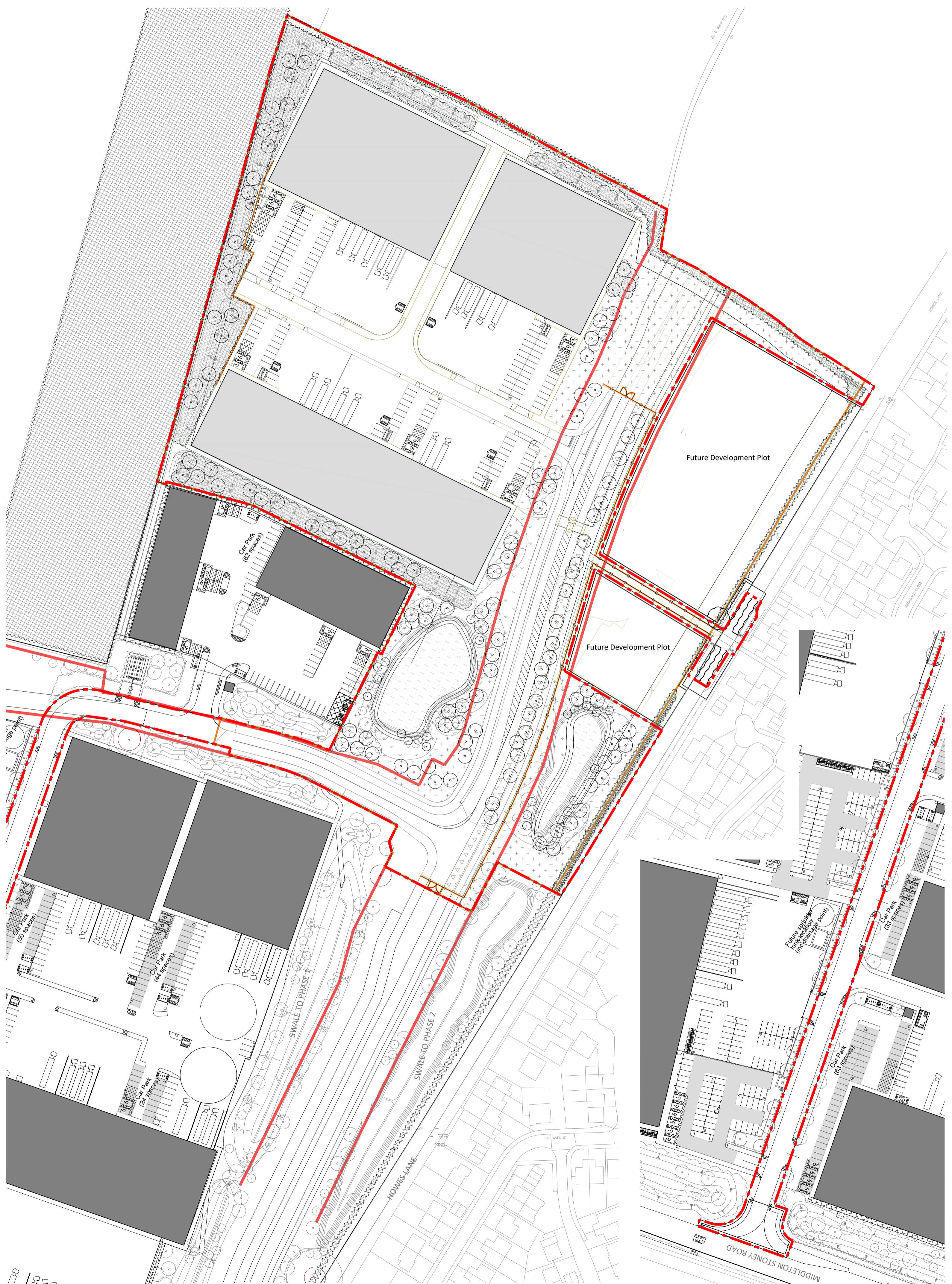
email: planningecology@warwickshire.gov.uk
tel: 01926 418060

If there is an anticipated loss to biodiversity and no further ecological enhancements can be incorporated within the development it may be possible to compensate for this loss through a biodiversity offsetting scheme.

Please contact The Environment Bank for discussions on potential receptor sites in your area:

email: lmartland@environmentbank.com
tel: 01926 412772





- Key**
- Planning application boundary
 - Proposed building
 - Existing building
 - Contours / landform
 - Existing vegetation to be protected and retained
 - Native hedgerow planting
 - Native woodland planting
 - Swale meadow grass (seasonally wet)
 - Tall meadow grass (through management)
 - Short meadow grass (through management)
 - Native understorey mix
 - Amenity shrub planting
 - Proposed tree in soft landscape
 - Existing trees to be retained
 - Acoustic 4m fence
Refer to architect's drawing
 - Low fence
Refer to architect's drawing

Botanical Name	Root condition	Form	Height (cm)	% Mix
Native understorey mix				
Cornus sanguinea	BR	bushy, 3 brks	60-80cm	15
Viburnum opulus	BR	bushy, 3 brks	60-80cm	20
Viburnum lantana	BR	bushy, 3 brks	60-80cm	20
Euonymus europaeus	BR	bushy, 3 brks	60-80cm	15
Crataegus monogyna	BR	bushy, 3 brks	60-80cm	15
Salix purpurea	BR	bushy, 3 brks	60-80cm	15

Planted in swathes of 3-5 species at 1500mm centres

MIXTURE	SUPPLIER	SOW RATE
EG8 (Meadow grass mixture for wetlands)	Emorsgate Seeds	5g/m ² (50kgs/ha)

MIXTURE	SUPPLIER	SOW RATE
EM1 - Basic general purpose meadow mixture	Emorsgate Seeds	5g/m ²

MIXTURE	SUPPLIER	SOW RATE
A3 Grass seed mix	Germinal Seeds	50g/m ²

Botanical Name	Root condition	Size	Density
Amenity shrub planting			
<i>Carex oshimensis</i> 'Evergold'	C	2L	6/m ²
<i>Cornus sanguinea</i> 'Midwinter fire'	C	3L	5/m ²
<i>Cotinus coggygria</i> 'Purple Flame'	C	5L	3/m ²
<i>Escallonia</i> 'Apple Blossom'	C	3L	5/m ²
<i>Hebe</i> 'Red Edge'	C	3L	5/m ²
<i>Hebe</i> 'Mrs Winder'	C	3L	5/m ²
<i>Photinia x fraserii</i> 'Red Robin'	C	5L	3/m ²
<i>Prunus</i> 'Otto Luyken'	C	3L	5/m ²
<i>Lonicera nitida</i> 'Maigrun'	C	3L	5/m ²
<i>Miscanthus sinensis</i>	C	3L	3/m ²

Botanical Name	Root condition	Height	% mix
Native shrub mix			
<i>Crataegus monogyna</i>	C	60-80cm	35
<i>Prunus spinosa</i>	C	60-80cm	35
<i>Cornus sanguinea</i>	C	60-80cm	30

Planted with spacing at varied centres from 0.8-1.2m. Species in groups of 3-7no

- Notes**
- All dimensions in mm, unless otherwise stated.
 - Scaling from drawing if printed incorrectly may lead to errors.
 - All information outside red line boundary shown for contextual purpose only.
 - All hatch patterns are indicative only unless stated otherwise.
 - This drawing is to be read in conjunction with the following re-form landscape architecture documentation:
 - 0897-RFM-XX-00-DR-L-0002-LANDSCAPE SECTIONS AND all relevant documentation from the design team
 - Levels information on this drawing illustrates the design intent. The contractor is to check and verify all levels and dimensions against site survey information.
 - Any discrepancies in the design information are to be brought to the attention of re-form landscape architecture, in writing, prior to commencement of construction works.
 - All proprietary products shall be installed in strict accordance with manufacturers written instructions.
 - Refer to other consultants' drawings and specifications for the following design information:
 - Foundation details
 - Base course and/or sub bases design & specification
 - Waterproofing of any element
 - Levels & Drainage design and infrastructure
 - Lighting and ducting
 - Existing & proposed utilities
 - Plant quantities are to suit site areas in accordance with scheduled plant densities.
 - Any proposed plant substitution shall be agreed with the landscape architect prior to ordering.

Code	Botanical Name	Root condition	Form	Height (cm)	% Mix
Native woodland planting mix					
A*	<i>Alnus glutinosa</i>	BR	Feathered	150cm	5
Ag	<i>Alnus glutinosa</i>	BR	1+1	60-80cm	5
Bp	<i>Betula pendula</i>	BR	1+1	60-80cm	5
Ca	<i>Corylus avellana</i>	BR	Feathered	150cm	5
Pn	<i>Populus nigra</i> spp. <i>betulifolia</i>	BR	1+1	60-80cm	5
Pt	<i>Populus tremula</i>	BR	Feathered	150cm	5
Qr	<i>Quercus robur</i>	BR	Feathered	150cm	10
Pa	<i>Prunus avium</i>	BR	1+1	60-80cm	5
Ac	<i>Acer campestre</i>	BR	Feathered	150cm	5
Sc	<i>Salix caprea</i>	BR	1+1	60-80cm	10
Ms	<i>Malus sylvestris</i>	BR	Feathered	150cm	5
Ld	<i>Larix decidua</i>	BR	1+1	60-80cm	5
Pn	<i>Pinus sylvestris</i>	BR	Feathered	150cm	10
Cs	<i>Cornus sanguinea</i>	BR	bushy, 3 brks	60-80cm	5
Cm	<i>Crataegus monogyna</i>	BR	bushy, 3 brks	60-80cm	5
Ia	<i>Ilex aquifolium</i>	BR	bushy, 3 brks	60-80cm	5
Sl	<i>Sorbus aria</i>	BR	bushy, 3 brks	60-80cm	5

Botanical Name	Overall height (cm)	Mature Height (m)
Trees		
<i>Betula pendula</i>	min. 500	8m
<i>Acer campestre</i>	min. 450-500	8m
<i>Quercus robur</i>	min. 450-500	10m
<i>Salix caprea</i>	min. 450-500	8m
<i>Betula pendula</i>	min. 450-500	8m
<i>Sorbus aria</i>	min. 450-500	8m
<i>Populus alba</i>	min. 450-500	8m
<i>Populus nigra</i>	min. 450-500	8m
<i>Acer campestre</i>	min. 350-425	8m
<i>Quercus robur</i>	min. 350-425	10m
<i>Salix caprea</i>	min. 350-425	8m
<i>Betula pendula</i>	min. 350-425	8m
<i>Sorbus aria</i>	min. 350-425	8m
<i>Pinus sylvestris</i>	min. 350-425	10m
<i>Quercus ilex</i>	min. 350-425	8m
<i>Ilex aquifolium</i>	min. 350-425	8m
<i>Prunus avium</i>	min. 350-425	8m
<i>Prunus cerasifera</i> 'Nigra'	min. 350-425	8m
<i>Alnus glutinosa</i>	min. 350-425	8m
<i>Salix alba</i>	min. 350-425	8m
<i>Tilia cordata</i> 'Greenspire'	min. 500	10m
<i>Carpinus betulus</i> 'Frans Fontaine'	min. 500	10m

Date	Description of revision	Drawn by	Checked by	Approved by	Revision
05.05.22	Layout updated to account for new cycle path width	JR	GD	GD	P05
04.04.22	Woodland planting mix revised	SD	GD	GD	P04
10.03.22	Planning update	MD	MD	GD	P03
06.09.21	Planning issue	PL	PL	GD	P02
04.08.21	Issued for co-ordination	MD	PL	GD	P01

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Project
AXIS J9, BICESTER
RF21-897

Client
ALBION LAND

Document title
PLANTING STRATEGY

Paper size
A1
Scale
1:1000

Status
FOR INFORMATION
S2

Drawing number
0897-RFM-XX-00-DR-L-0003
Revision
P05



* If trees to be planted within the planting season contractor may consider RB