Ecology Technical Note: Condition 20, Axis J9, Bicester (Ref 10706_R01_Biodiversity Enhancements Tech Note_Condition 20_GS)

Date Issued: 04/09/2023

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 paragraphs10.6.30, 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 onto poles (kestrel box) adjacent to hedgerows /grassland on site (see 10706/Bio enhancement Plan for specific installation locations) and retained trees within hedgerow (x4 general purpose boxes) following manufacturers specification with the entrances facing between north and east to avoid the strongest sunlight and wettest winds and to be placed 3-8m 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)**

Figure 1: Pole Mounted Kestrel Box (CJ Widlife, 2023)

- **2 x 1MR Schwegler Avianex (General purpose) – Open fronted (or similar)**

Figure 2: General purpose bird box – open fronted (NHBS, 2023)

- **2 x 1MR Schwegler Avianex (General purpose) – entrance hole (or similar)**

Figure 3: General purpose bird box - nest hole (NHBS, 2023)

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 pole mounted at a height of 4m and installed adjacent to hedgerows on the western perimeter of the site (see 10706/Bio enhancement Plan for specific installation locations) and will be faced east our south facing to provide maximum amount of daylight exposure to generate heat. The proposed bat boxes are designed to benefit a range of bat species associated with urban edge habitats. The box entrances will have a clear unobstructed flight path to ensure safe access/egress.

- **3 x Pole Mounted – Single Box (or similar)**

Figure 4 Pole Mounted Bat Roost (Wildcare, 2023)

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

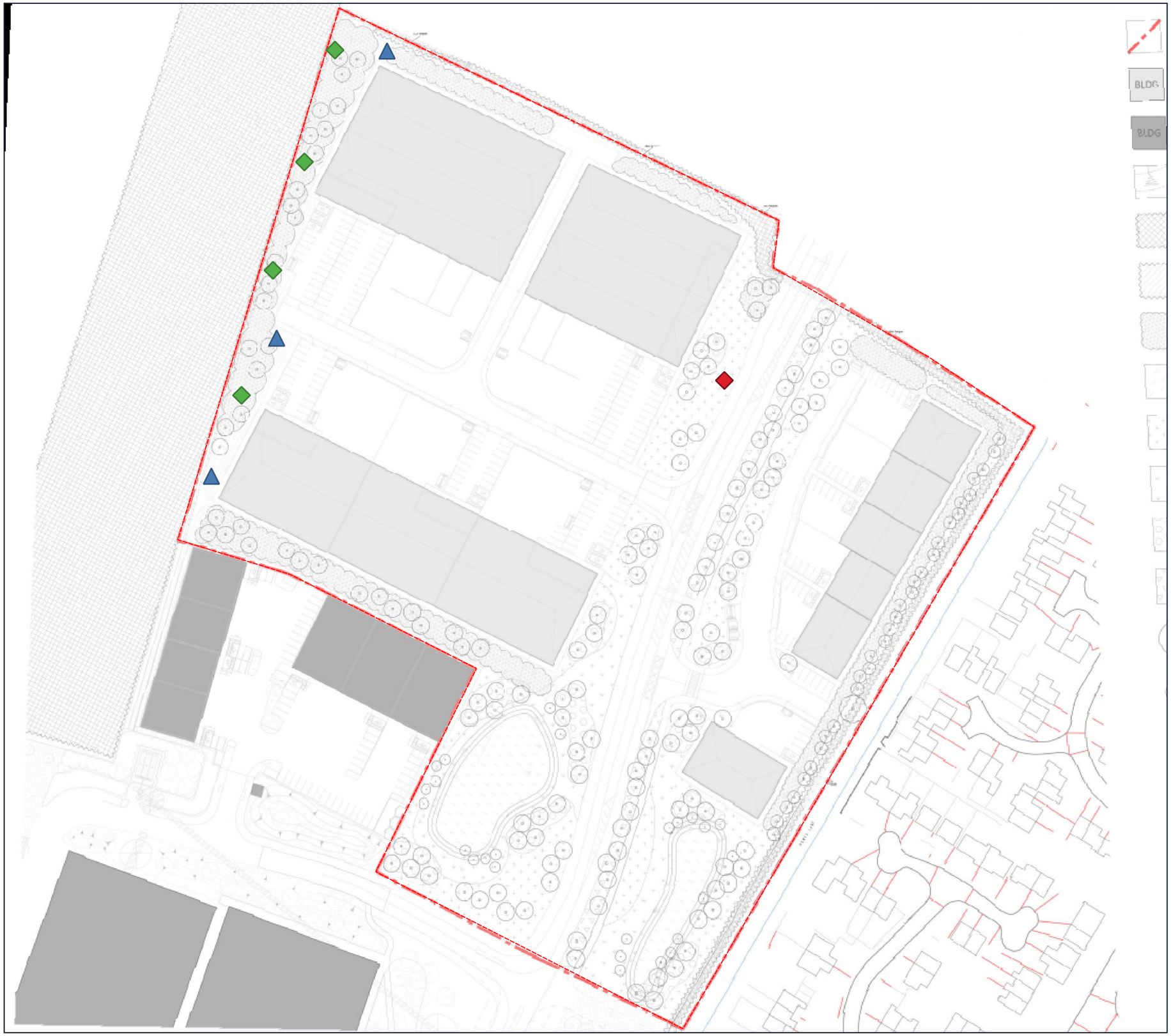
The bat boxes will be positioned at a height that aims to minimise potential predation risks (4 to 5m). The specific bat box model recommended above has been designed to require no cleaning or maintenance.

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%.

Plans

10706 – Biodiversity Enhancement Plan -



Boundaries

Redline Boundary

Baseline - Point Habitats

Bat box - pole mounted

General purpose bird box - retained tree mounted

Kestrel box - pole mounted

N

0 50 m

Project	Middleton, Stoney Road, Bicester
Drawing Title	Bioenhancement Plan
Scale	As Shown (Approximate)
Drawing No.	10706
Date	04/09/2023
Checked	

Tyler Grange

WeWork Offices. 30 Stamford Street.

T: 020 393 494 70 E:

Appendix

Appendix 1: - Biodiversity Impact Assessment Calculator v. 18.3
Appendix 2: Landscape Plan

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
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	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 all habitats within the site boundary			Habitat distinctiveness		Habitat condition		Habitat Biodiversity Value Habitats to be retained with no change within development		Habitats to be retained and enhanced within development		Habitats to be lost within development	
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			A		B	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
													∑D + ∑F + ∑H
											Site habitat biodiversity value		41.29

Before/after impact		Indirect Negative Impacts Including off site habitats	K					Value of loss from indirect impacts K x A x B = Li, Lii	Li - Lii
	Before								
	After								
	Before								
	After								
	Before								
	After								
	Before								
	After								
	Before								
	After								
		Total	0.00					M	0.00
									HIS = J + M
									40.69

Habitat Impact Score (HIS)

	Proposed habitats on site (Onsite mitigation)			Target habitats distinctiveness		Target habitat condition			Time till target condition		Difficulty of creation / restoration		*Habitat biodiversity value*
T. Note	code	Phase 1 habitat description	*Area (ha)*	*Distinctiveness*	*Score*	*Condition*	*Score*		*Time (years)*	*Score*	*Difficulty*	*Score*	
		Habitat Creation	N		O		P			Q		R	(N x O x P) / Q / R
	B22	Grassland: Semi-improved neutral grassland	2.32	Medium	4	Moderate	2		10 years	1.4	Medium	1.5	**8.84**
	F22	Wetland: Inundation vegetation	0.57	High	6	Good	3		10 years	1.4	Low	1	**7.33**
	B22	Grassland: Semi-improved neutral grassland	0.25	Medium	4	Moderate	2		5 years	1.2	Medium	1.5	**1.11**
	A112	Woodland: Broad-leaved plantation	1.82	Medium	4	Good	3		32+ years	3	Medium	1.5	**4.85**
	J14	Other: Introduced shrub	0.18	Low	2	Good	3		5 years	1.2	Low	1	**0.90**
	n/a	Built Environment: Buildings/hardstanding	12.69	none	0	Poor	1		5 years	1.2	Low	1	**0.00**
	A3	Woodland: Scattered trees	0.32	Medium	4	Good	3		25 years	2.4	Low	1	**1.60**
	A21	Woodland: Dense continuous scrub	0.38	Medium-Low	3	Good	3		10 years	1.4	Low	1	**2.44**
	A112	Woodland: Broad-leaved plantation	0.47	Medium	4	Good	3		32+ years	3	Medium	1.5	**1.25**
	F22	Wetland: Inundation vegetation	0.13	High	6	Good	3		10 years	1.4	Low	1	**1.67**
	B22	Grassland: Semi-improved neutral grassland	1.06	Medium	4	Good	3		5 years	1.2	Medium	1.5	**7.07**
	A21	Woodland: Dense continuous scrub	0.19	Medium-Low	3	Good	3		10 years	1.4	Low	1	**1.22**
	A3	Woodland: Scattered trees	0.78	Medium	4	Good	3		25 years	2.4	Low	1	**3.90**
		Total	**21.16**										
		Habitat Enhancement						Existing value S (= F)					((N x O x P) - S) / Q / R
Field Ma	C31	Other: Tall ruderal	0.20	Medium-Low	3	Good	3	**0.60**	10 years	1.4	Low	1	**0.86**
		Total	**0.20**								Trading down correction value		0.00
											Habitat Mitigation Score (HMS)		**43.04**
													HBIS = HMS - HIS
											Habitat Biodiversity Impact Score		**2.35**
											Percentage of biodiversity impact loss		

KEY	
	No action required
	Action required
	Drop-down menu
	Calculation
	Automatic lookup
	Overall Result

	Loss to biodiversity
	Gain to biodiversity

Warwickshire Coventry and Solihull - Biodiversity Impact Assessment Calculator - Linear Features

Please fill in both tables

KEY	
(dark)	No action required
(green)	Enter value
(light green)	Drop-down menu
(peach)	Calculation
(blue)	Automatic lookup
(orange)	**Result**

Linear Features
Hedges and other linear features can offer a higher biodiversity value per length than a standard area of habitat due to factors such as connectivity and must therefore be compensated for in parallel to the standard metric.

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 linear features on site			**Linear distinctiveness**		**Linear condition**		**Linear Biodiversity Value** – **Linear features to be retained with no change within development**		**Linear features to be retained and enhanced within development**		**Linear features to be lost within development**	
T. Note	code	Phase 1 habitat description	*Feature length (km)*	*Distinctiveness*	*Score*	*Condition*	*Score*	*Length (km)*	*Existing value*	*Length (km)*	*Existing value*	*Length (km)*	*Existing value*
		Direct Impacts and retained features			A		B	C	A x B x C = D	E	A x B x E = F	G	A x B x G = H
Hedgero	J23	Hedges: Hedge with trees	2.40	Medium-High	5	Moderate	2			1.58	**15.80**	**0.82**	**8.20**
Ditches	J26	Ditches: Dry ditch	1.32	Low	2	Poor	1	0.70	**1.40**			**0.62**	**1.24**
		Total	3.72				Total	0.70	1.40	1.58	15.80	1.44	9.44

∑D + ∑F + ∑H

Site Linear Biodiversity Value: 26.64

Before/after impact	**Indirect Negative Impacts**	K					Value of loss from indirect impacts K x A x B = Li, Lii	Li - Lii
Before								
After								
Before								
After								
Before								
After								
Before								
After								
Before								
After								
Total		0.00					M	0.00

HIS = J + M

Linear Impact Score (LIS): **9.44**

CAUTION - Destruction of features of medium or high distinctiveness, e.g. hedgerows and streams, may be against local policy. Has the mitigation hierarchy been followed, can impact to these habitats be avoided?
Any unavoidable loss of valuable habitats must be replaced like-for-like. E.G. Loss of hedgerows must be replaced with similar or better hedgerows. All newly planted hedges should be native species-rich hedgerows.

	Proposed linear features on site (Onsite mitigation)			Target linear distinctiveness		Target linear condition			Time till target condition		Difficulty of creation / restoration		*Linear biodiversity value*
T. Note	code	Phase 1 habitat description	*Length (km)*	*Distinctiveness*	*Score*	*Condition*	*Score*		*Time (years)*	*Score*	*Difficulty*	*Score*	
		Linear Creation	N		O		P			Q		R	(N x O x P) / Q / R
	J211	Hedges: Native species rich intact hedge	0.61	High	6	Moderate	2		10 years	1.4	Low	1	**5.21**
		Total	**0.61**										
		Linear Enhancement						Existing value S (= F)					((N x O x P) - S) / Q / R
	J23	Hedges: Hedge with trees	1.58	Medium-High	5	Good	3	**15.80**	10 years	1.4	Low	1	**5.64**
			1.52	ERROR - Total length of features enhancement must equal total length of features to be enhanced above							Trading down correction value		0.00
												Linear Mitigation Score (LMS)	**10.85**
													LBIS = LMS - LIS
												Linear Biodiversity Impact Score	**1.41**
												Percentage of linear impact loss	

KEY	
	No action required
	Action required
	Drop-down menu
	Calculation
	Automatic lookup
	Overall Result

	Loss to biodiversity
	Gain to biodiversity

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

Warwickshire County Council

the Environment Bank

Habitat trading down correction calculator

Existing Site

Existing habitat	Area of habitat impact	Distinctiveness	High distinctiveness habitat loss biodiversity value	Medium-High distinctiveness habitat loss biodiversity value	Medium distinctiveness habitat loss biodiversity value	Medium-Low distinctiveness habitat loss biodiversity value
Direct impacts						
Other: Arable	19.79	Low	0.00	0.00	0.00	0.00
Other: Tall ruderal	0.37	Medium-Low	0.00	0.00	0.00	1.11
Built Environment: Buildings/hardstanding	1.00	none	0.00	0.00	0.00	0.00
-			0.00	0.00	0.00	0.00
-			0.00	0.00	0.00	0.00
-			0.00	0.00	0.00	0.00
-			0.00	0.00	0.00	0.00
-			0.00	0.00	0.00	0.00
-			0.00	0.00	0.00	0.00
-			0.00	0.00	0.00	0.00
-			0.00	0.00	0.00	0.00
-			0.00	0.00	0.00	0.00
-			0.00	0.00	0.00	0.00
-			0.00	0.00	0.00	0.00
-			0.00	0.00	0.00	0.00
-			0.00	0.00	0.00	0.00
-			0.00	0.00	0.00	0.00
-			0.00	0.00	0.00	0.00
-			0.00	0.00	0.00	0.00
-			0.00	0.00	0.00	0.00
-			0.00	0.00	0.00	0.00
-			0.00	0.00	0.00	0.00
-			0.00	0.00	0.00	0.00
-			0.00	0.00	0.00	0.00
-			0.00	0.00	0.00	0.00
-			0.00	0.00	0.00	0.00
-			0.00	0.00	0.00	0.00
-			0.00	0.00	0.00	0.00
-			0.00	0.00	0.00	0.00
-			0.00	0.00	0.00	0.00
Indirect impacts						
-	-		0.00	0.00	0.00	0.00
-	-		0.00	0.00	0.00	0.00
-	-		0.00	0.00	0.00	0.00
-	-		0.00	0.00	0.00	0.00
-	-		0.00	0.00	0.00	0.00
TOTAL	21.16		0.00	0.00	0.00	1.11

Proposed Site

Proposed habitat creation	Area of habitat creation	Distinctiveness	High distinctiveness proposed biodiversity value	Medium-High distinctiveness proposed biodiversity value	Medium distinctiveness proposed biodiversity value	Medium-Low distinctiveness proposed biodiversity value
Grassland: Semi-improved neutral grassland	2.32	Medium	0.00	0.00	8.84	0.00
Wetland: Inundation vegetation	0.57	High	7.33	0.00	0.00	0.00
Grassland: Semi-improved neutral grassland	0.23	Medium	0.00	0.00	1.02	0.00
Woodland: Broad-leaved plantation	1.82	Medium	0.00	0.00	4.85	0.00
Other: Introduced shrub	0.18	Low	0.00	0.00	0.00	0.00
Built Environment: Buildings/hardstanding	12.80	none	0.00	0.00	0.00	0.00
Woodland: Scattered trees	0.32	Medium	0.00	0.00	1.60	0.00
Woodland: Dense continuous scrub	0.38	Medium-Low	0.00	0.00	0.00	2.44
Woodland: Broad-leaved plantation	0.53	Medium	0.00	0.00	1.41	0.00
Wetland: Inundation vegetation	0.22	High	2.83	0.00	0.00	0.00
Grassland: Semi-improved neutral grassland	0.99	Medium	0.00	0.00	6.60	0.00
Woodland: Dense continuous scrub	0.22	Medium-Low	0.00	0.00	0.00	1.41
Other: Introduced shrub	0.12	Low	0.00	0.00	0.00	0.00
Woodland: Scattered trees	0.46	Medium	0.00	0.00	2.30	0.00
-	-		0.00	0.00	0.00	0.00
Proposed habitat enhancement	Area	Distinctiveness	High	Medium-High	Medium	Medium-Low
Other: Tall ruderal	0.20	Medium-Low	0.00	0.00	0.00	0.86
-	-		0.00	0.00	0.00	0.00
-	-		0.00	0.00	0.00	0.00
-	-		0.00	0.00	0.00	0.00
-	-		0.00	0.00	0.00	0.00
-	-		0.00	0.00	0.00	0.00
-	-		0.00	0.00	0.00	0.00
-	-		0.00	0.00	0.00	0.00
-	-		0.00	0.00	0.00	0.00
-	-		0.00	0.00	0.00	0.00
-	-		0.00	0.00	0.00	0.00
-	-		0.00	0.00	0.00	0.00
-	-		0.00	0.00	0.00	0.00
-	-		0.00	0.00	0.00	0.00
-	-		0.00	0.00	0.00	0.00
TOTAL	21.36		10.16	0.00	26.63	4.71

Trading Down Correction	High	Medium-High	Medium	Medium-Low
Value of existing habitat loss per distinctiveness	0.00	0.00	0.00	1.11
Value of created habitats per distinctiveness	10.16	0.00	26.63	4.71
Would this result in trading down habitats?	Never	No	No	No
If no, value each distinctiveness still requiring compensation	0	0	0	0
Surplus gain to be carried over to compensate loss of lower habitats (rolls over)	10.16	10.16	36.78	40.39
Trading down correction value	n/a	0	0	0

This calculator assess whether there is any down trading in habitats value. E.g. loss of high distinctiveness habitat cannot be compensated for by surpluss medium mitigation.
correction value which enters into the primary calculator to take this into account. Such that the full level of high habitat loss compensation is required. However if additional me
generated above the value of the high loss, this surplus is still be taken into account with on site gain.

CAUTION - Destruction of habitats of high distinctiveness, e.g. lowland meadow or ancient woodland, 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 like.

Linear trading down correction calculator

Existing Site

Existing linear features	length of loss (km)	Distinctiveness	High distinctiveness linear loss biodiversity value	Medium-High distinctiveness linear loss biodiversity value	Medium distinctiveness linear loss biodiversity value	Medium-Low distinctiveness linear loss biodiversity value	Low distinctiveness linear loss biodiversity value
Direct impacts							
Hedges: Hedge with trees	0.82	Medium-High	0.00	8.2	0.00	0.00	0.00
Ditches: Dry ditch	0.62	Low	0.00	0.00	0.00	0.00	1.24
-			0.00	0.00	0.00	0.00	0.00
-			0.00	0.00	0.00	0.00	0.00
-			0.00	0.00	0.00	0.00	0.00
-			0.00	0.00	0.00	0.00	0.00
-			0.00	0.00	0.00	0.00	0.00
-			0.00	0.00	0.00	0.00	0.00
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-			0.00	0.00	0.00	0.00	0.00
-			0.00	0.00	0.00	0.00	0.00
-			0.00	0.00	0.00	0.00	0.00
-			0.00	0.00	0.00	0.00	0.00
-			0.00	0.00	0.00	0.00	0.00
-			0.00	0.00	0.00	0.00	0.00
Indirect impacts							
-	-		0.00	0.00	0.00	0.00	0.00
-	-		0.00	0.00	0.00	0.00	0.00
-	-		0.00	0.00	0.00	0.00	0.00
-	-		0.00	0.00	0.00	0.00	0.00
-	-		0.00	0.00	0.00	0.00	0.00
TOTAL	1.44		0.00	8.20	0.00	0.00	1.24

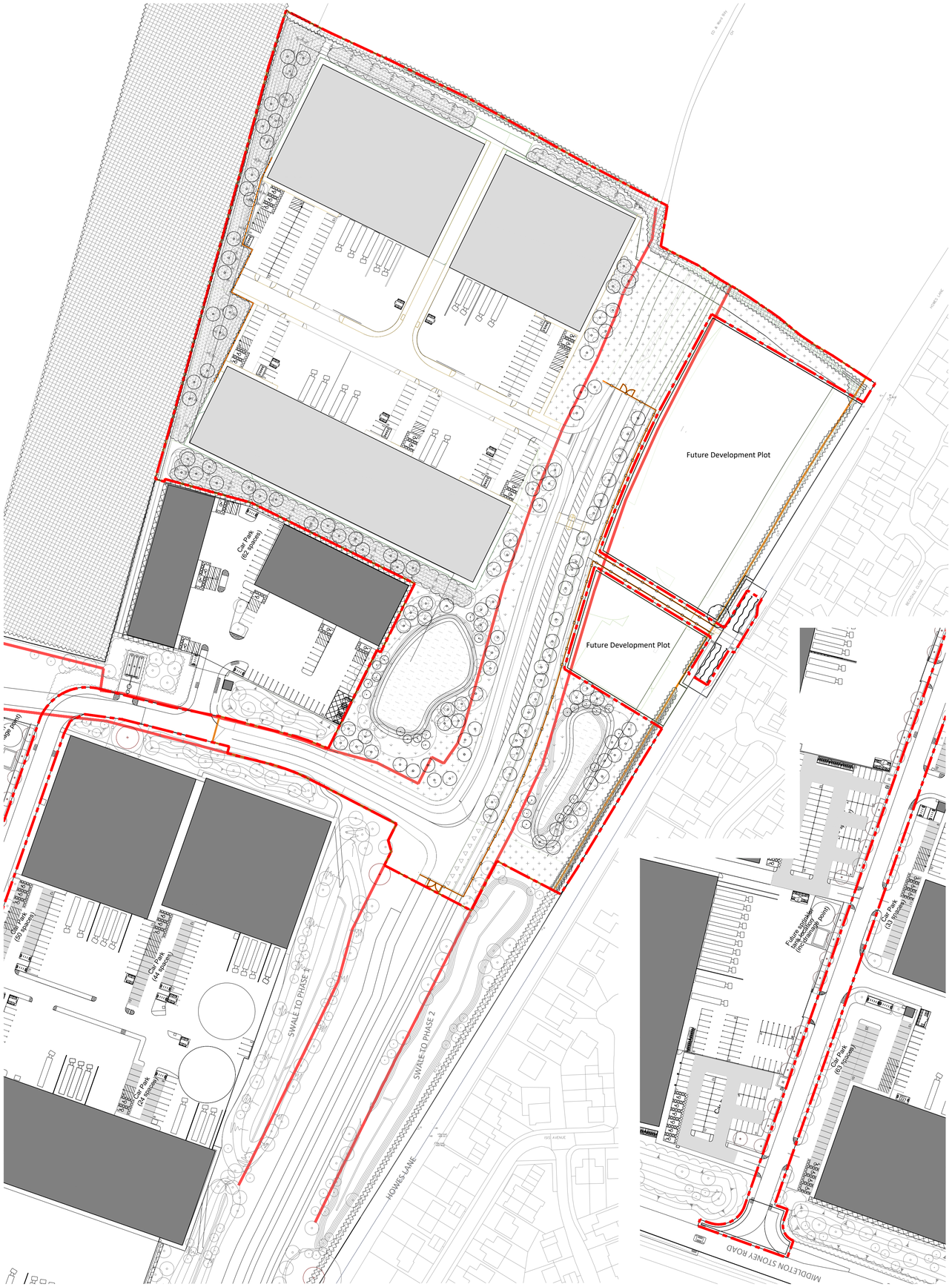
Proposed Site

Proposed linear creation	Length of feature (km)	Distinctiveness	High distinctiveness proposed linear biodiversity value	Medium-High distinctiveness proposed linear biodiversity value	Medium distinctiveness proposed linear biodiversity value	Medium-Low distinctiveness proposed linear biodiversity value	Low distinctiveness proposed linear biodiversity value
Hedges: Native species rich intact hedge	0.61	High	5.21	0.00	0.00	0.00	0.00
-	0.00		0.00	0.00	0.00	0.00	0.00
-	0.00		0.00	0.00	0.00	0.00	0.00
-	0.00		0.00	0.00	0.00	0.00	0.00
-	0.00		0.00	0.00	0.00	0.00	0.00
-	0.00		0.00	0.00	0.00	0.00	0.00
-	0.00		0.00	0.00	0.00	0.00	0.00
-	0.00		0.00	0.00	0.00	0.00	0.00
-	0.00		0.00	0.00	0.00	0.00	0.00
-	0.00		0.00	0.00	0.00	0.00	0.00
-	0.00		0.00	0.00	0.00	0.00	0.00
-	0.00		0.00	0.00	0.00	0.00	0.00
-	0.00		0.00	0.00	0.00	0.00	0.00
-	0.00		0.00	0.00	0.00	0.00	0.00
-	0.00		0.00	0.00	0.00	0.00	0.00
Proposed linear enhancement	Length	Distinctiveness	High	Medium-High	Medium	Medium-Low	Low
Hedges: Hedge with trees	1.58	Medium-High	0.00	5.64	0.00	0.00	0.00
-	0.00		0.00	0.00	0.00	0.00	0.00
-	0.00		0.00	0.00	0.00	0.00	0.00
-	0.00		0.00	0.00	0.00	0.00	0.00
-	0.00		0.00	0.00	0.00	0.00	0.00
-	0.00		0.00	0.00	0.00	0.00	0.00
-	0.00		0.00	0.00	0.00	0.00	0.00
-	0.00		0.00	0.00	0.00	0.00	0.00
-	0.00		0.00	0.00	0.00	0.00	0.00
-	0.00		0.00	0.00	0.00	0.00	0.00
-	0.00		0.00	0.00	0.00	0.00	0.00
-	0.00		0.00	0.00	0.00	0.00	0.00
-	0.00		0.00	0.00	0.00	0.00	0.00
-	0.00		0.00	0.00	0.00	0.00	0.00
-	0.00		0.00	0.00	0.00	0.00	0.00
TOTAL	2.19		5.21	5.64	0.00	0.00	0.00

Linear trading down correction	High	Medium-High	Medium	Medium-Low	Low
Value of existing habitat loss per distinctiveness	0.00	8.20	0.00	0.00	1.24
Value of created habitats per distinctiveness	5.21	5.64	0.00	0.00	0.00
Would this result in trading down habitats?	Never	No	No	No	No
If no, value each distinctiveness still requiring compensation	0	0	0	0	1.24
Surplus gain to be carried over to compensate loss of lower habitats (rolls over)	5.21	2.65	2.65	2.65	n/a
Trading down correction value	n/a	0	0	0	0

This calculator assess whether there is any down trading in linear habitats. E.g. loss of high distinctiveness habitat and surplus creation of medium or low habitats. It calculates a correction value which enters into the primary calculator to take this into account. Such that the full level of high habitat loss compensation is required. However if additional medium gain is generated above the value of the high loss, this surplus is still be taken into account with on site gain.

CAUTION - Destruction of each habitat of medium distinctiveness and above should be mitigated for with creation/restoration of a similar habitat. Trading up of habitat type is encouraged.



Key

- Planning application boundary
- BLDG — Proposed building
- BLDG — 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
- Accounstic 4m fence Refer to architect's drawing
- Low fence Refer to architect's drawing

Botanical Name	Root condition	Form	Height (cm)	
Native understory mix				% 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

Swale meadow grass mix (seasonally wet)		
MIXTURE	SUPPLIER	SOW RATE
EG8 (Meadow grass mixture for wetlands)	Emorsgate Seeds	5g/m2 (50kgs/ha)

Meadow grass mix (Long and short)		
MIXTURE	SUPPLIER	SOW RATE
EM1 - Basic general purpose meadow mixture	Emorsgate Seeds	5g/m2

Amenity grass to 'Grassroad'		
MIXTURE	SUPPLIER	SOW RATE
A3 Grass seed mix	Germinal Seeds	50g/m2

Botanical Name	Root condition	Size	Density
Amenity shrub planting			
Carex oshimensis 'Evergold'	C	2L	6/m²
Cornus sanguinea 'Midwinter fire'	C	3L	5/m²
Cotinus coggygria 'Purple Flame'	C	5L	3/m²
Escallonia 'Apple Blossom'	C	3L	5/m²
Hebe 'Red Edge'	C	3L	5/m²
Hebe 'Mrs Winder'	C	3L	5/m²
Photinia x fraserii 'Red Robin'	C	5L	3/m²
Prunus 'Otto Luyken'	C	3L	5/m²
Lonicera nitida 'Maigrun'	C	3L	5/m²
Miscanthus sinensis	C	3L	3/m²

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

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

Notes

1. All dimensions in mm, unless otherwise stated.
2. Scaling from drawing if printed incorrectly may lead to errors.
3. All information outside red line boundary shown for contextual purpose only.
4. All hatch patterns are indicative only unless stated otherwise.
5. 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
6. Levels information on this drawing illustrates the design intent. The contractor is to check and verify all levels and dimensions against site survey information.
7. 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.
8. All proprietary products shall be installed in strict accordance with manufacturers written instructions.
9. 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
10. Plant quantities are to suit site areas in accordance with scheduled plant densities.
11. Any proposed plant substitution shall be agreed with the landscape architect prior to ordering.

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

Scale

0m 25m 50m 75m 100m

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

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

N

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