

Dated

2026

- (1) BARNSELY METROPOLITAN BOROUGH COUNCIL**
- (2) RICHARD SEELS AND WILLIAM SEELS**
- (3) DEBORAH SEELS AND JONATHAN SEELS**
- (4) FREDERICKA ELIZABETH MARY LAUGHTON AND
PAUL WHEELER**
- (5) STAMFORD LAND LTD**
- (6) WENTWORTH TRUSTEE COMPANY LIMITED**
- (7) GOLDTHORPE DEVELOPMENT PARTNERSHIP
LLP**
- (8) CITY OF DONCASTER COUNCIL**
- (9) SOUTH YORKSHIRE MAYORAL COMBINED
AUTHORITY**

Agreement pursuant to section 106 of the Town and Country
Planning Act 1990

Relating to land to the south of Dearne Valley Parkway,
Goldthorpe, Rotherham, S72 0JE

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BETWEEN

- (1) **BARNSELY METROPOLITAN BOROUGH COUNCIL** of the Town Hall, Church Street, Barnsley, S70 2TA (the “**Council**”)
- (2) **RICHARD SEELS and WILLIAM SEELS** as trustees of the **JOSEPH MICHAEL SEELS WILL TRUST** of Elm Bank House, Home Farm, Burghwallis, Doncaster, S Yorkshire DN6 9JS. (the “**First Owner**”)
- (3) **DEBORAH SEELS and JONATHAN SEELS** of Highgate House Farm, Goldthorpe, Rotherham, South Yorkshire, S63 9EY (together the “**Second Owner**”)
- (4) **FREDERICKA ELIZABETH MARY LAUGHTON** of 28 Marsh Road, Cowes PO31 8JQ and **PAUL WHEELER** of 143 High Street, Newport, Isle Of Wight PO30 1TY (together the “**Third Owner**”)
- (5) **STAMFORD LAND LTD** (Co. Regn. No. 06439501) of 71 Haigh Lane, Hoylandswaine, Sheffield S36 7JQ. (the “**Fourth Owner**”)
- (6) **WENTWORTH TRUSTEE COMPANY LIMITED** (Co. Regn. No. 03736061) whose registered office is at Hitchcock House, Hilltop Park, Devizes Road, Salisbury SP3 4UP. (the “**Fifth Owner**”)
- (7) **GOLDTHORPE DEVELOPMENT PARTNERSHIP LLP** (company number: OC443044) whose registered office is at Lumonics House, Valley Drive, Swift Valley Industrial Estate, Rugby, Warwickshire CV21 1TQ (the “**Developer**”)
- (8) **CITY OF DONCASTER COUNCIL** of Civic Office, Waterdale, Doncaster, DN1 3BU (the “**City Council**”)
- (9) **SOUTH YORKSHIRE MAYORAL COMBINED AUTHORITY** of 11 Broad Street West, Sheffield S1 2BQ (“the “**SYMCA**”)

BACKGROUND

- (A) By virtue of the Act the Council is the local planning authority for the purposes of this Agreement for the area in which the Site is situated and is the local planning authority by whom the planning obligations hereby created are enforceable.
- (B) The City Council is the highway authority for local highways within the vicinity of the Site which are likely to be impacted by the Development.
- (C) Pursuant to the South Yorkshire Passenger Transport Executive (Transfer of Functions) Order 2023 the South Yorkshire Passenger Transport Executive was dissolved and all of its functions, property, rights, and liabilities were transferred to SYMCA. SYMCA has a duty to secure the provision of such public passenger transport services as it considers appropriate for meeting any public transport requirements within its area which in the view of SYMCA would not be met apart from any action taken by it for that purpose.
- (D) The First Owner is the registered proprietor of that part of the Site shown shaded blue on Plan 1 at Schedule 1 registered with absolute title at the Land Registry under title number SYK521723.
- (E) The Second Owner is the registered proprietor of that part of the Site shown shaded green on Plan 1 at Schedule 1 registered with absolute title at the Land Registry under title number SYK243292 and SYK292130.
- (F) The Second Owner is the registered proprietor of the part of the land shaded yellow and the red strip on Plan 1 at Schedule 1 registered as sharing absolute title at the Land Registry under title number SYK706127.

- (G) The Third Owner is the registered proprietor of the part of the land shaded light purple on Plan 1 at Schedule 1 registered with absolute title at the Land Registry under title number SYK704654.
- (H) The Fourth Owner is the registered proprietor of the part of the land shaded orange on Plan 1 at Schedule 1 registered with absolute title at the Land Registry under title number SYK386868.
- (I) The Fifth Owner is the registered proprietor of the part of the land shaded red and maroon on Plan 1 at Schedule 1 registered with absolute title at the Land Registry under title numbers SYK524497 and SYK524458. The Fifth Owner also has an interest in the First Owner's property registered under title number SYK521723. The Fifth Owner also has an interest in the Second Owner's property registered under title number SYK706127, SYK243292 and SYK292130 pursuant to an option agreement dated 22 December 2023. The Fifth Owner also has an interest in the Third Owner's property registered under title SYK704654 pursuant to an option agreement dated 20 February 2023. The Fifth Owner also has an interest in the Fourth Owner's property registered under title SYK386868 pursuant to an option agreement dated 6 June 2023.
- (J) The Planning Application has been submitted by the Applicant to the Council for determination.
- (K) The Owners have agreed to enter into this Agreement to create planning obligations in respect of each of their interests in the Site in favour of the Council and City Council pursuant to section 106 of the Act and to be bound by and observe and perform the covenants, agreements, conditions and stipulations contained in this Agreement.
- (L) The Developer is the proposed purchaser of the Owners' interest in the Site under a contract made between the Owners, the Developer and other parties and will assume the obligations contained in this Agreement on the part of the Owners in respect of the Site following completion of the transfer of the Owner's interest in the Site to it pursuant to the said contract.
- (M) At its meeting on 18 February 2025 the Planning Committee of the Council resolved to approve the Development applied for in the Planning Application subject to the parties hereto entering into the obligations herein provided for.

1 DEFINITIONS

- 1.1 In this Agreement (including the Background) the following words and phrases have the meanings shown opposite in addition to the definitions given in the description of the parties:

Above Ground Works	means the carrying out of any works comprised in the Development beyond foundation level of a Unit and which may include the erection of the load bearing framework, the main floor or ground beams, casing to columns, and beams for structural or protective purposes
the Act	means the Town and Country Planning Act 1990 (as amended)
the Applicant	Equites Newlands (Goldthorpe) Limited (Co. Regn. No. 14095885) whose registered office is at Lumonics House Valley Drive Swift Valley Industrial Estate Rugby Warwickshire CV21 1TQ
Commencement of Development	means carrying out of material operation as defined in section 56(4) of the Act save that for the purposes of this Agreement the term is not to include operations in connection with site clearance, demolition, archaeological investigations, investigations for the purpose of assessing ground conditions, remediation works, environmental investigation, site and soil surveys, diversion and

laying of services, erection of a contractor's work compound, erection of a site office, erection of Site access, erection of fencing to the site boundary and / or the temporary display of site notices or advertisements and the expression "Commence" and "Commencement" is to be construed accordingly

Contributions

means the following financial contributions payable under this Deed:

- (a) Mitigation Contribution (as defined in Schedule 4);
- (b) Bus Services Contribution (as defined in Schedule 5);
- (c) A635 Footway/Cycleway Contribution (as defined in Schedule 6);
- (d) Bus Layby Contribution (as defined in Schedule 6);
- (e) Bus Stop Contribution (as defined in Schedule 6);
- (f) PRow Contribution (as defined in Schedule 6); and
- (g) Skylark Plot Contribution (as defined in Schedule 7 **Error! Reference source not found.**)

and "Contribution" is to be construed accordingly

Development

means the development of the Site pursuant to the Planning Permission

English Will Trust

means the will dated 3 July 1970 (with the two codicils thereto) governing immovable property in Great Britain of the late Right Honourable Olive Dorothea Countess Fitzwilliam who died on 14 December 1975 which will and codicils were proved in the Principal Registry of the Family Division of the High Court of Justice on 26 February 1976 by Robert Edward MacWatt, Allan Berkeley Valentine Hughes and Messrs Hoare Trustees being the executors named in the said will

Full Permission Development

means that part of the Development for which the Planning Application seeks full planning permission and shown edged red on Drawing No: 22081 L001 Rev D attached to this Agreement as Plan 2 at Schedule 1

Interest

means at the annual rate of 2% above HSBC Bank base rate for the time being in force

Occupation and Occupied

means occupation for the purposes permitted by the Planning Permission but not including occupation by

	personnel engaged in construction, fitting out or decoration or occupation for marketing or display or occupation in relation to security operations
Owners	means together the First, Second, Third, Fourth and Fifth Owner collectively and "Owner" means any one of them
Outline Development	means that part of the Development for which the Planning Application seeks outline planning permission and shown edged in blue hatching on 22081 L0001 Rev D attached to this Agreement as Plan 2 at Schedule 1
Phases	means the phases of the Development which shall comprise of the first phase being the Full Permission Development and the subsequent phases being each those individual plots of the Outline Development edged in blue on plan 22081 L0001 Rev D attached to this Agreement as Plan 2 at Schedule 1
Plan 1	means the plan attached to this Agreement at Schedule 1 and marked Plan 1
Plan 2	means the plan with Drawing No: 22081 L001 Rev D attached to this Agreement at Schedule 1 and marked Plan 2
Planning Application	means the hybrid planning application comprising an application for outline planning permission for the construction of Storage and Distribution (Use Class B8) and General Employment (Use Class B2) space with ancillary offices and gatehouses with all matters reserved except for site access and an application for full planning permission for engineering infrastructure works to support the employment development comprising the access roads; earthworks to create the development platform zones/bunding, drainage and culvert works, a flood compensation area and strategic landscaping areas ascribed reference number 2023/1105 by the Council
Planning Permission	means the planning permission to be issued pursuant to the Planning Application
Reserved Matters Application	means an application for approval of any one or more those matters reserved under the terms of the outline element of the Planning Permission for subsequent approval within the meaning of section 92 of the Act
Retail Prices Index	means the all-items retail prices index published from time to time by the Office for National Statistics, or any successor to that index from time to time and in the event that such index ceases to be published and no successor index is introduced the parties (acting reasonably) shall agree an appropriate

alternative index and the expression "Retail Prices Indexation" is to be construed accordingly

Site	means the land to the south of Dearne Valley Parkway, Goldthorpe, Rotherham, S72 0JE, depicted outlined in red in Drawing No: 22081 P0501, Rev: B attached to this Agreement as Plan 2 at Schedule 1
Unit(s)	means a unit for Storage and Distribution (Use Class B8) and General Employment (Use Class B2) space with ancillary offices and gatehouses comprised in the Development
Working Days	means any day other than a Saturday and a Sunday and Bank or Public holiday.

2 CONSTRUCTION

- 2.1 Where in this Agreement reference is made to any clause, paragraph or schedule or recital such reference (unless the context otherwise requires) is a reference to a clause, paragraph or schedule or recital in this Agreement.
- 2.2 Words importing the singular meaning where the context so admits include the plural meaning and vice versa.
- 2.3 Words of the masculine gender include the feminine and neuter genders and words denoting actual persons include companies, corporations and firms and all such words shall be construed interchangeably in that manner.
- 2.4 Wherever there is more than one person named as a party and where more than one party undertakes an obligation all their obligations can be enforced against all of them jointly and severally unless there is an express provision otherwise.
- 2.5 Any reference to an Act of Parliament shall include any modification, extension or re-enactment of that Act for the time being in force and shall include all instruments, orders, plans regulations, permissions and directions for the time being made, issued or given under that Act or deriving validity from it.
- 2.6 References to any party to this Agreement shall include the successors in title to that party and to any person deriving title through or under that party and in the case of the Council the successors to its statutory functions.
- 2.7 The headings and contents list are for reference only and shall not affect construction.

3 STATUTORY PROVISIONS

- 3.1 This Agreement is a planning obligation made pursuant to section 106 of the Act and to the extent that the covenants in this Agreement are not made under section 106 of the Act they are made under section 111 of the Local Government Act 1972 and Section 1 of the Localism Act 2011.
- 3.2 The covenants, restrictions and requirements imposed upon the Owners under this Agreement create planning obligations pursuant to Section 106 of the Act and are enforceable by the Council and City Council (as appropriate) against the Owners.

4 CONDITIONALITY

- 4.1 This Agreement is conditional on:

- 4.1.1 the grant of the Planning Permission; and
- 4.1.2 the Commencement of Development pursuant to the Planning Permission.

5 THE OWNERS' COVENANTS

- 5.1 The Owners hereby covenant with the Council to observe and perform the restrictions and obligations which apply to the Owners' interest in the Site and are contained in the Second Third Fourth Fifth Sixth Seventh and Eighth Schedules to this Agreement.
- 5.2 The Owners covenant with the City Council to observe and perform the restrictions and obligations contained in the Third and Fourth Schedules to this Agreement.

6 THE COUNCIL'S, CITY COUNCIL'S AND SYMCA'S COVENANTS WITH THE OWNERS

- 6.1 The Council, City Council and SYMCA hereby covenant with the Owners to observe and perform any obligations on their respective parts contained in Schedule 9 to this Agreement.

7 AGREEMENTS AND DECLARATIONS

The parties agree and declare

- 7.1 No provisions of this Agreement shall be enforceable under the Contracts (Rights of Third Parties) Act 1999.
- 7.2 This Agreement shall be registrable as a local land charge by the Council.
- 7.3 Where the agreement, approval, consent or expression of satisfaction is required by the Owners from the Council under the terms of this Agreement, such agreement, approval or consent or expression of satisfaction shall not be unreasonably withheld or delayed and any such agreement, consent, approval or expression of satisfaction shall be given on behalf of the Council by the Head of Planning and Building Control or his nominee.
- 7.4 Following the performance and satisfaction of all of the obligations contained in this Agreement the Council shall forthwith effect the cancellation of all entries made in the Register of Local Land Charges in respect of this Agreement.
- 7.5 Insofar as any clause or clauses of this Agreement are found (for whatever reason) to be invalid illegal or unenforceable then such invalidity illegality or unenforceability shall not affect the validity or enforceability of the remaining provisions of this Agreement.
- 7.6 This Agreement shall cease to have effect (insofar only as it has not already been complied with) if the Planning Permission shall be quashed, revoked or otherwise withdrawn or (without the consent of the Owners) it is modified by any statutory procedure (other than a modification under section 73 or 96A of the Act) or expires prior to the Commencement of Development.
- 7.7 If pursuant to clause 7.6 this Agreement shall terminate and cease to have effect the Council shall upon request remove any entry relating to this Agreement from the Register of Local Land Charges.
- 7.8 No person shall be liable for any breach of any of the planning obligations or other provisions of this Agreement after it shall have parted with its interest in the Site or the part of the Site in respect of which such breach occurs but without prejudice to liability for any subsisting breach arising prior to parting with such interest and the retention of a right of way or easement of the Site shall not constitute an interest for the purposes of this clause.
- 7.9 This Agreement shall not be enforceable against:
 - 7.9.1 anyone whose only interest in the Site or any part of the Site is in the nature of the benefit of an easement or covenant or as the owner of the sub soil of any highway within the Site;

- 7.9.2 any person whose only interest in the Site or any part of the Site is an estate or interest in any subterranean stratum of mineral or other matter;
 - 7.9.3 any statutory undertaker acquiring any part of the Site, any owner of any electricity sub-station and/or gas governor site and/or pumping station to other supply installation nor those deriving title from them.
- 7.10 Any mortgagee or chargee for the time being shall not be liable for any breach of the obligations in this Agreement unless committed or continuing at a time when the mortgagee or chargee is in possession of all or any part of the Site.
- 7.11 Subject to clause 7.13 nothing in this Agreement shall prohibit or limit the right to develop any part of the Site in accordance with a planning permission (other than the Planning Permission) granted (whether or not on appeal) after the date of this Agreement nor shall any payment be due to the Council pursuant to this Agreement as a result of any development carried out pursuant to such later planning permission.
- 7.12 Nothing contained or implied in this Agreement shall prejudice or affect the rights discretions powers duties and obligations of the Council under all statutes by-laws statutory instruments orders and regulations in the exercise of its functions as a local authority.
- 7.13 In the event that:
- 7.13.1 the Council shall at any time hereafter grant a planning permission pursuant to an application made under section 73 or 73A of the Act (or any re-enactment thereof) in respect of the conditions in the Planning Permission; and
 - 7.13.2 the Council and the Owners shall agree such in writing by exchange of correspondence
- references in this Agreement to the Planning Application and the Planning Permission shall be deemed to include any such subsequent planning applications and planning permissions granted as aforesaid and this Agreement shall henceforth take effect and be read and construed accordingly.

8 COUNCIL'S AND SYMCA'S COSTS

- 8.1 The Developer shall pay prior to completion of this Agreement:
- 8.1.1 The Council's legal costs;
 - 8.1.2 The City Council's legal costs in the sum of £1,500 (One Thousand Five Hundred Pounds);
 - 8.1.3 SYMCA's legal costs in the sum of £350.00 (three hundred and fifty pounds) plus VAT where such VAT is not recoverable by the Authority.
- 8.2 All consideration given in accordance with the terms of this Deed shall be exclusive of any VAT properly payable in respect thereof.
- 8.3 The Owners hereby acknowledge and agree that if at any time VAT is required to be paid in respect of any of the Contributions due under this Deed then to the extent that VAT had not been previously charged in respect of that Contribution the Council, City Council or SYMCA shall have the right to issue a VAT invoice to the Owners and the VAT shall be paid accordingly.
- 8.4 The Owners acknowledge and agree that the Council may use up to 5 (five) per cent of each of the Contributions payable to the Council for the purpose of monitoring the Owners' compliance with the Deed.

9 INTEREST

Without prejudice to any right, remedy or power herein contained or otherwise available to the Council, City Council or SYMCA, if any Contribution, payment or sum referred herein shall become due but shall remain unpaid for a period of exceeding five (5) Working Days the Owners shall pay on demand to the Council, City Council or SYMCA Interest from the date on which payment is to be made until date of payment thereof.

10 INDEXATION

- 10.1 All Contributions, payments and sums payable under this Deed shall be increased by an amount equivalent to an increase in the Retail Prices Index from the date of this Deed on which the relevant Contribution, payments or sums are payable Provided That if the Retail Prices Indexation shall result in a decrease the relevant sum payable shall not fall below the figures set out in this Deed.
- 10.2 In the event of an increase but not decrease in the Retail Prices Index the difference between the amount of the whole or part of the Contribution, payments and sums shall be calculated as follows:

$$A \times \frac{B}{C}$$

When:

- A = the amount of the whole or part of the Contribution, payments and sums payable;
- B = the Retail Prices Index at the date the Contribution, payments and sums or part thereof are received by the Council or City Council (as applicable); and
- C = the Retail Prices Index at the date hereof.

11 WAIVER

No waiver (whether expressed or implied) by the Council or the Owners or the Developer of any breach or default in performing or observing any of the covenants terms or conditions of this Agreement shall constitute a continuing waiver and no such waiver shall prevent the Council or the Owners or the Developer from enforcing any of the relevant terms or conditions or for acting upon any subsequent breach or default.

12 CHANGE IN OWNERSHIP

The Owners agree with the Council to give the Council immediate written notice of any change in ownership of any of their interests in the Site occurring before all the obligations under this Agreement have been discharged such notice to give details of the transferee's full name and registered office (if a company or usual address if not) together with the area of the Site or unit of occupation purchased by reference to a plan.

13 DISPUTE RESOLUTION

- 13.1 In the event of any dispute or difference arising between any of the parties to this Agreement in respect of any matter contained in this Agreement such dispute or difference shall be referred to an independent and suitable person holding appropriate professional qualifications to be appointed (in the absence of an agreement) by or on behalf of the president for the time being of the professional body chiefly relevant in England with such matters as may be in dispute and such person shall act as an expert whose decision shall be final and binding on the parties in the absence of manifest error and any costs shall be payable by the parties to the dispute in such proportion as the expert shall determine and failing such determination shall be borne by the parties in equal shares.
- 13.2 In the absence of agreement as to the appointment or suitability of the person to be appointed pursuant to Clause 13.1 or as to the appropriateness of the professional body then such question may be referred by either part to the president for the time being of the Law Society for him to appoint a solicitor to determine the dispute such solicitor acting as an expert and his decision shall be final and binding on all parties in the absence of manifest error and his costs shall be payable by the parties to the

dispute in such proportion as he shall determine and failing such determination shall be borne by the parties in equal shares.

- 13.3 Any expert howsoever appointed shall be subject to the express requirement that a decision was reached and communicated to the relevant parties within the minimum practicable timescale allowing for the nature and complexity of the dispute and in any event not more than twenty-eight working days after the conclusion of any hearing that takes place or twenty-eight working days after he has received any file or written representation.
- 13.4 The expert shall be required to give notice to each of the said parties requiring them to submit to him within ten working days of notification of his appointment written submissions and supporting material and the other party will be entitled to make a counter written submission within a further ten working days.

14 NOTICE

Any notice required to be given under this agreement shall be in writing and shall be delivered personally or sent by pre-paid first-class post or recorded delivery or by commercial courier, to any person required to receive the notice at its address as set out on page two of this agreement, or as otherwise specified by the relevant person by notice in writing to each other person.

- 14.1 Any notice shall be deemed to have been duly received:
- 14.1.1 if delivered personally, when left at the address and for the contact referred to in this clause;
 - 14.1.2 if sent by prepaid first-class post or special delivery, at 9.00am on the second working day after posting; or
 - 14.1.3 if delivered by commercial courier, on the date and at the time that the courier's delivery receipt is signed

15 LIABILITY

- 15.1 The liability of the Wentworth Trustee Company Limited for the obligations contained in this Agreement shall be limited to the assets of the English Will Trust from time to time.

16 JURISDICTION

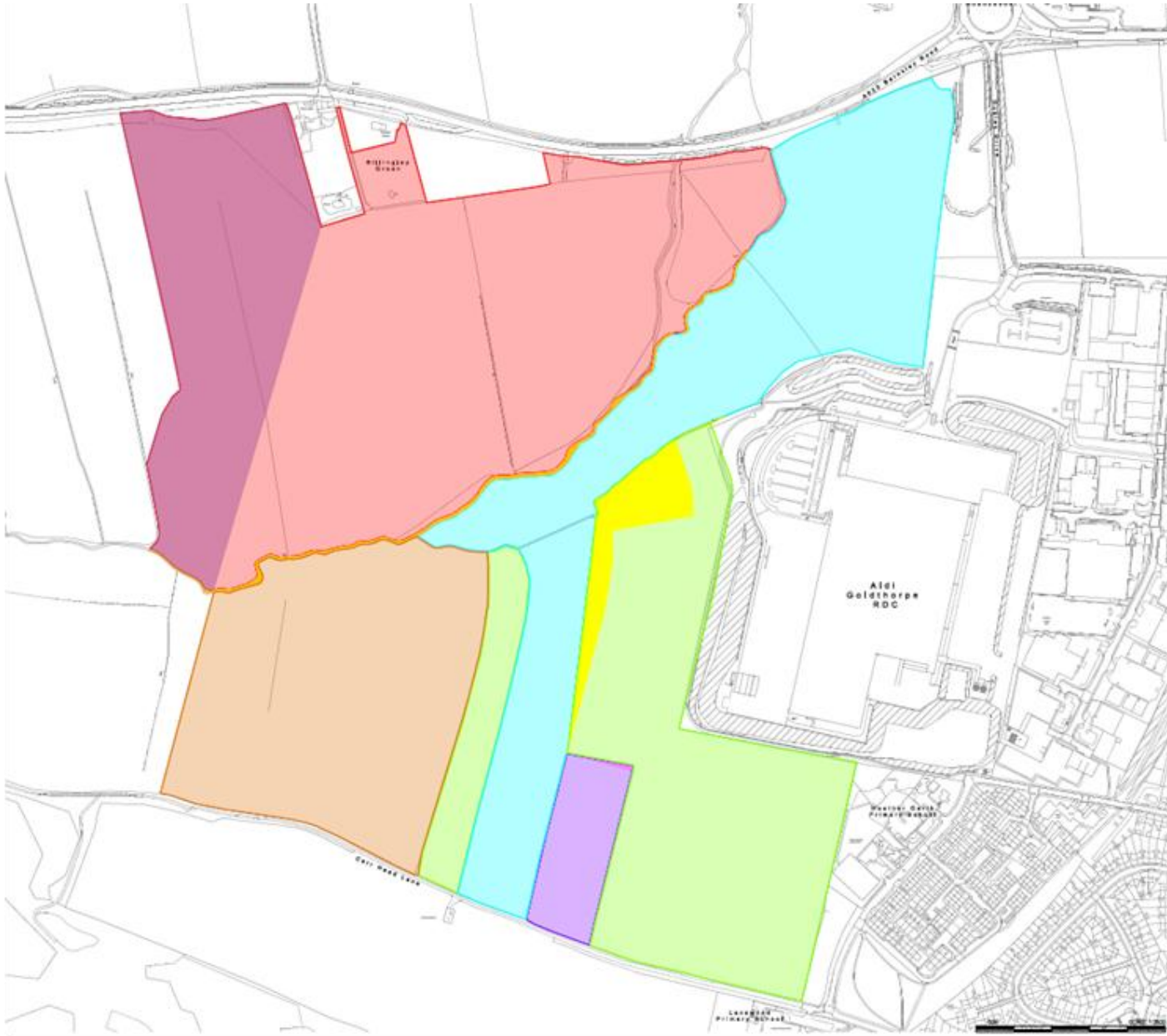
This Agreement is governed by and interpreted in accordance with the law of England and the parties submit to the jurisdiction of the courts of England.

17 DELIVERY

The provision of this Agreement (other than this clause which shall be of immediate effect) shall be no effect until this Agreement has been dated.

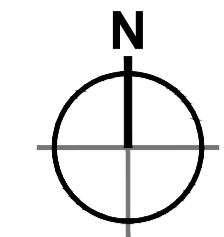
This document is executed as a deed and is delivered on the date stated at the beginning of this deed.

SCHEDULE 1 - PLAN 1 (SITE OWNERSHIP)



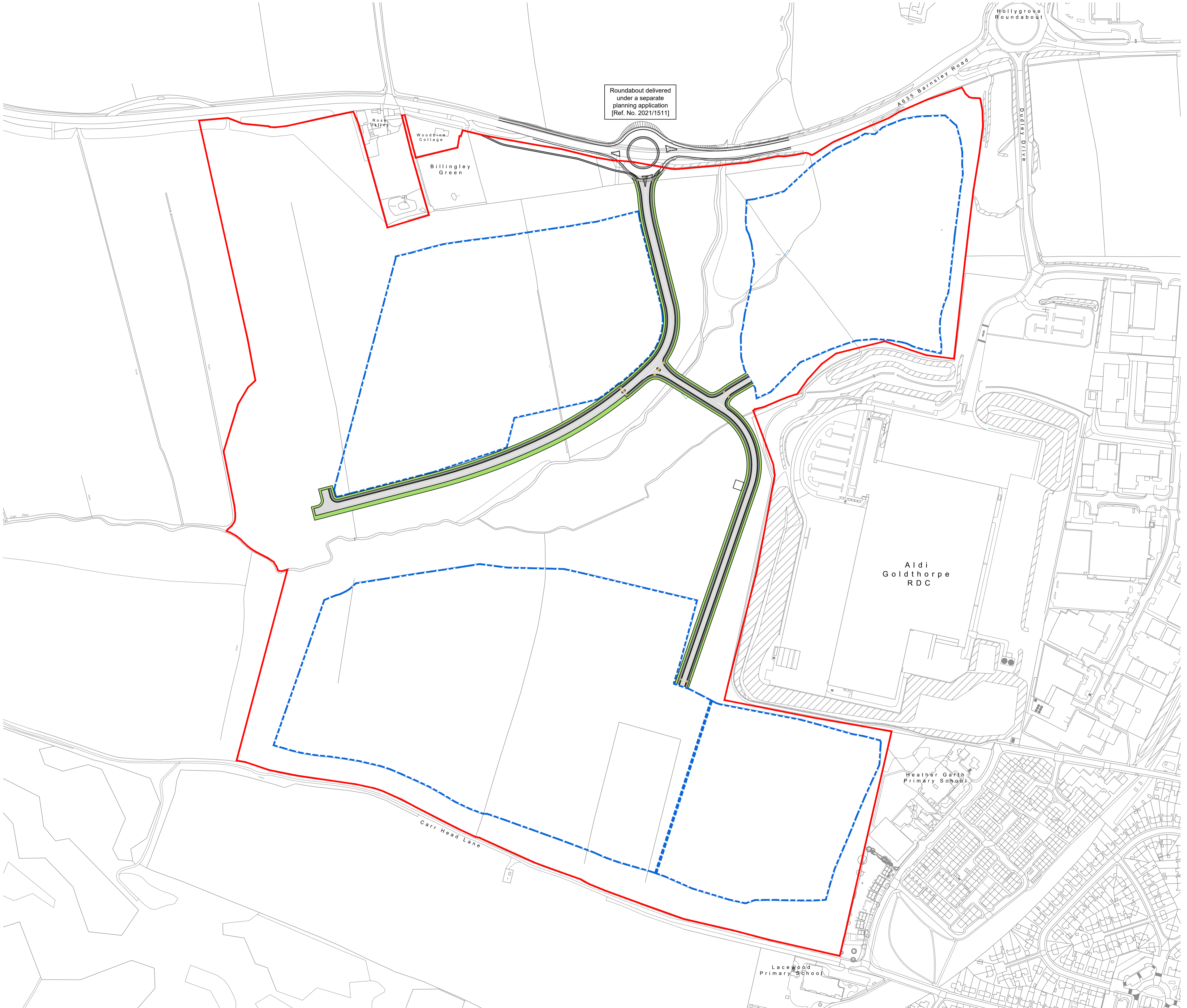
SCHEDULE 1 – PLAN 2 (SITE)

- Dimensions are in millimeters, unless stated otherwise.
 - Scaling of this drawing is not recommended.
 - It is the recipient's responsibility to print this document to the correct scale.
 - All relevant drawings and specifications should be read in conjunction with this drawing.



Key

	Planning Application Boundary	210.81	ac	85.31	ha
	Area applied for as part of outline application comprising of development plots which will be subject to future reserved matters applications	108.78	ac	44.02	ha
	Area applied for as part of full application (including associated road infrastructure and formation of development plateaus)	210.81	ac	85.31	ha



Roundabout delivered under a separate planning application [Ref. No. 2021/1511]

D	Amendment to annotation	SM	MDS	14.10.24
C	Amendment to annotation	SM	MDS	25.06.24
B	Amendment to annotation and key	SM	MDS	24.06.24
A	Preliminary Issue	SM	MDS	21.06.24
rev	amendments	by	ckd	date

Barnsley Road, Goldthorpe Development Plan

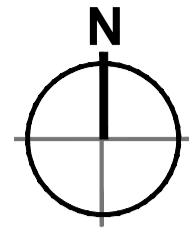


Drawing Status:	Legal
Drawn / Checked:	SM / MDS
Date:	21/06/2024
Scale:	1:2500 A1
Drawing no:	Revision:
22081 L0001	D

50m SCALE 1:2500

SCHEDULE 1 – PLAN 3 (ROSE VALLEY COTTAGE AND WOODBINE COTTAGE)

- Dimensions are in millimeters, unless stated otherwise.
 - Scaling of this drawing is not recommended.
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Key

Properties Eligible for Noise Mitigation Fund

Not to be used for mailing purposes



Rose Valley Cottage

Woodbine Cottage

rev	amendments	by	ckd	date

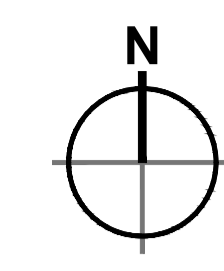
**Barnsley Road,
 Goldthorpe**
 Site Location Plan



Drawing Status:	Feasibility
Drawn / Checked:	SM / MDS
Date:	02/12/2024
Scale:	1:2500 A1
Drawing no:	Revision:
22081 F0066	C

SCHEDULE 1 – PLAN 4 (HICKLETON NOISE MITIGATION PROPERTIES)

- Dimensions are in millimeters, unless stated otherwise.
 - Scaling of this drawing is not recommended.
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 - All relevant drawings and specifications should be read in conjunction with this drawing.



Key

— Properties Eligible for the Hickleton Noise Mitigation Fund

Not to be used for mailing purposes

Contact	Address 1	Address 2	Address 3	Town	Pos
The Occupier	11 Home Farm Court	Hickleton		DONCASTER	DN5
The Occupier	2 Home Farm Court	Hickleton		DONCASTER	DN5
The Occupier	3 Home Farm Court	Hickleton		DONCASTER	DN5
The Occupier	12 Hickleton			DONCASTER	DN5
The Occupier	9 Hickleton			DONCASTER	DN5
The Occupier	1 Fir Tree Close	Hickleton		DONCASTER	DN5
The Occupier	21 Hickleton			DONCASTER	DN5
The Occupier	26 Hickleton			DONCASTER	DN5
The Occupier	27 Hickleton			DONCASTER	DN5
The Occupier	28 Hickleton			DONCASTER	DN5
The Occupier	30 Hickleton			DONCASTER	DN5
The Occupier	33 Hickleton			DONCASTER	DN5
The Occupier	35 Hickleton			DONCASTER	DN5
The Occupier	60 Hickleton			DONCASTER	DN5
The Occupier	62 Hickleton			DONCASTER	DN5
The Occupier	78 Hickleton			DONCASTER	DN5
The Occupier	4 The Mews	Hickleton		DONCASTER	DN5
The Occupier	5 The Mews	Hickleton		DONCASTER	DN5
The Occupier	East Lodge	Hickleton		DONCASTER	DN5
The Occupier	The Vcarage	Hickleton		DONCASTER	DN5
The Occupier	8 Hickleton			DONCASTER	DN5
The Occupier	3 Fir Tree Close	Hickleton		DONCASTER	DN5
The Occupier	Kirkbride Barn	Hickleton		DONCASTER	DN5
The Occupier	32 Hickleton			DONCASTER	DN5
The Occupier	34 Hickleton			DONCASTER	DN5
The Occupier	82 Hickleton			DONCASTER	DN5
The Occupier	86 Hickleton			DONCASTER	DN5
The Occupier	3 The Mews	Hickleton		DONCASTER	DN5
The Occupier	The Old Rectory	Hickleton		DONCASTER	DN5
The Occupier	White Fosse Cottage	Hickleton		DONCASTER	DN5
The Occupier	10 Hickleton			DONCASTER	DN5
The Occupier	2 Fir Tree Close	Hickleton		DONCASTER	DN5
The Occupier	29 Hickleton			DONCASTER	DN5
The Occupier	31 Hickleton			DONCASTER	DN5
The Occupier	76 Hickleton			DONCASTER	DN5
The Occupier	22 Home Farm Court	Hickleton		DONCASTER	DN5
The Occupier	1 Home Farm Court	Hickleton		DONCASTER	DN5
The Occupier	18 Home Farm Court	Hickleton		DONCASTER	DN5
The Occupier	20 Home Farm Court	Hickleton		DONCASTER	DN5
The Occupier	Linen Fold	Hickleton		DONCASTER	DN5
The Occupier	Grange Farm	Hickleton		DONCASTER	DN5
The Occupier	John O Gaunts	Hickleton		DONCASTER	DN5
The Occupier	80 Hickleton			DONCASTER	DN5
The Occupier	4 Lady Mary View	Hickleton		DONCASTER	DN5
The Occupier	1 The Mews	Hickleton		DONCASTER	DN5
The Occupier	16 Home Farm Court	Hickleton		DONCASTER	DN5
The Occupier	9 Home Farm Court	Hickleton		DONCASTER	DN5
The Occupier	Oreskeld	Hickleton		DONCASTER	DN5
The Occupier	19 Hickleton			DONCASTER	DN5
The Occupier	22 Hickleton			DONCASTER	DN5
The Occupier	64 Hickleton			DONCASTER	DN5
The Occupier	66 Hickleton			DONCASTER	DN5
The Occupier	84 Hickleton			DONCASTER	DN5
The Occupier	2 The Mews	Hickleton		DONCASTER	DN5
The Occupier	6 The Mews	Hickleton		DONCASTER	DN5
The Occupier	The Tractor Shed	Hickleton Hall	Hickleton	DONCASTER	DN5

B	Note Inclusion	SM	MS	03.12.24
A	Preliminary Issue	SM	MS	25.11.24
rev	amendments	by	ckd	date

Barnsley Road,
 Goldthorpe
 Hickleton Noise Mitigation Fund - Eligible Properties



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Drawing Status:	Legal
Drawn / Checked:	SM / MDS
Date:	25/11/2024
Scale:	1:1000 A1
Drawing no:	Revision:
22081 L0002	B

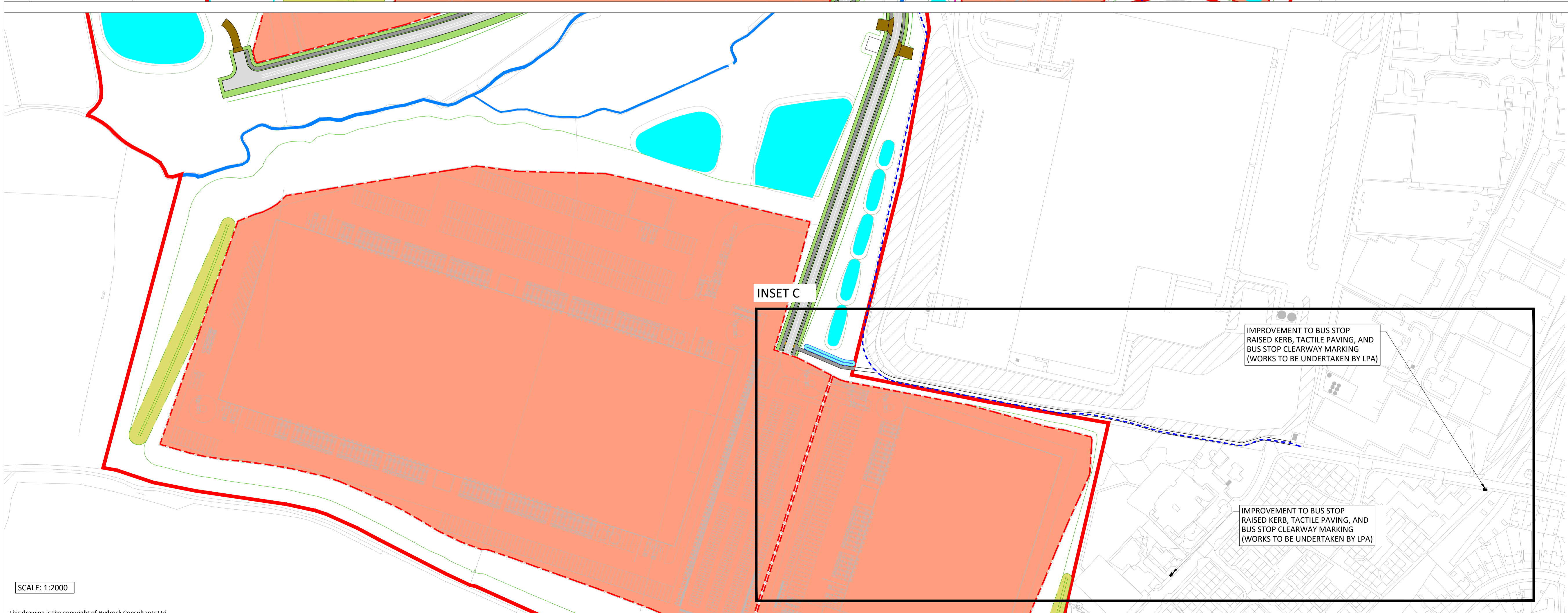
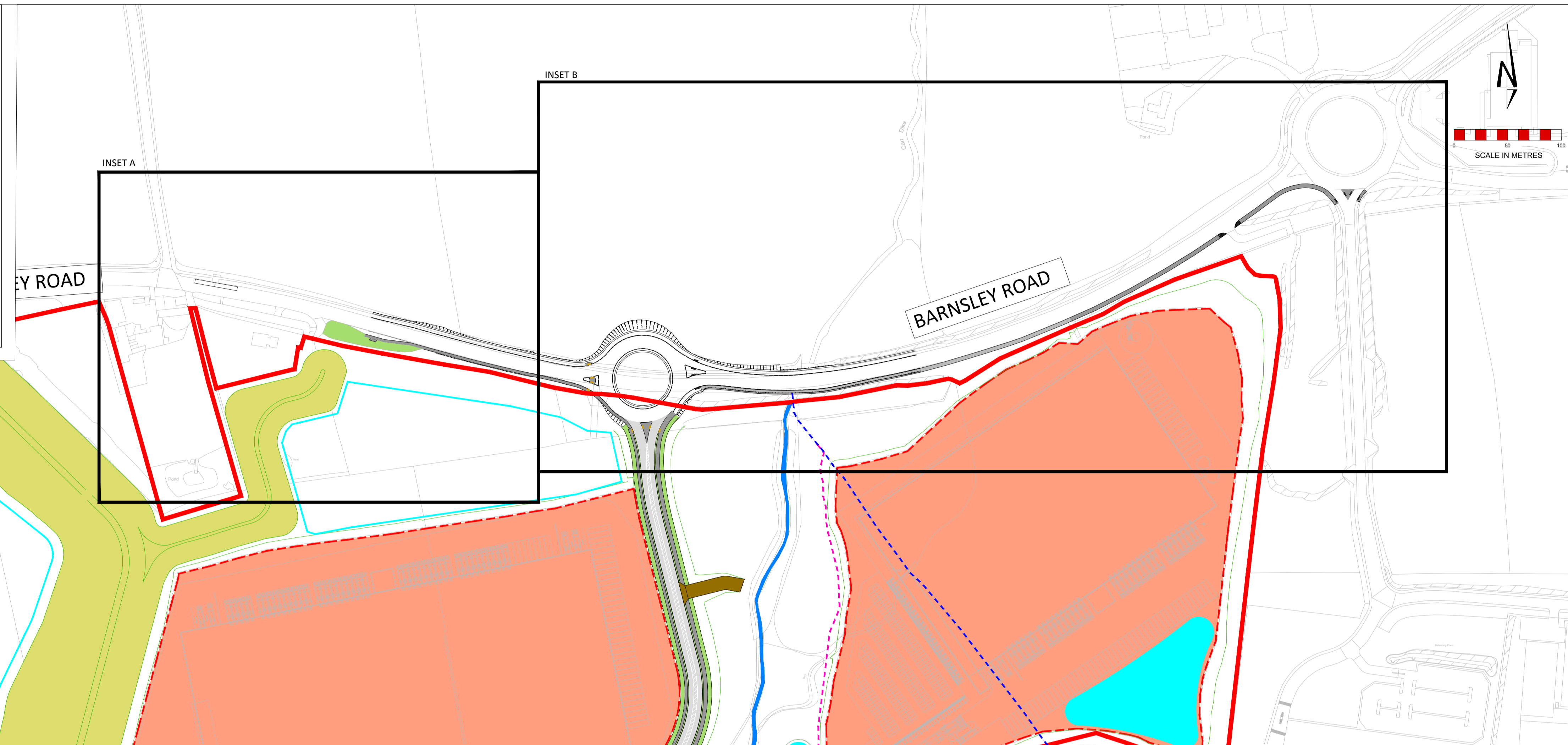
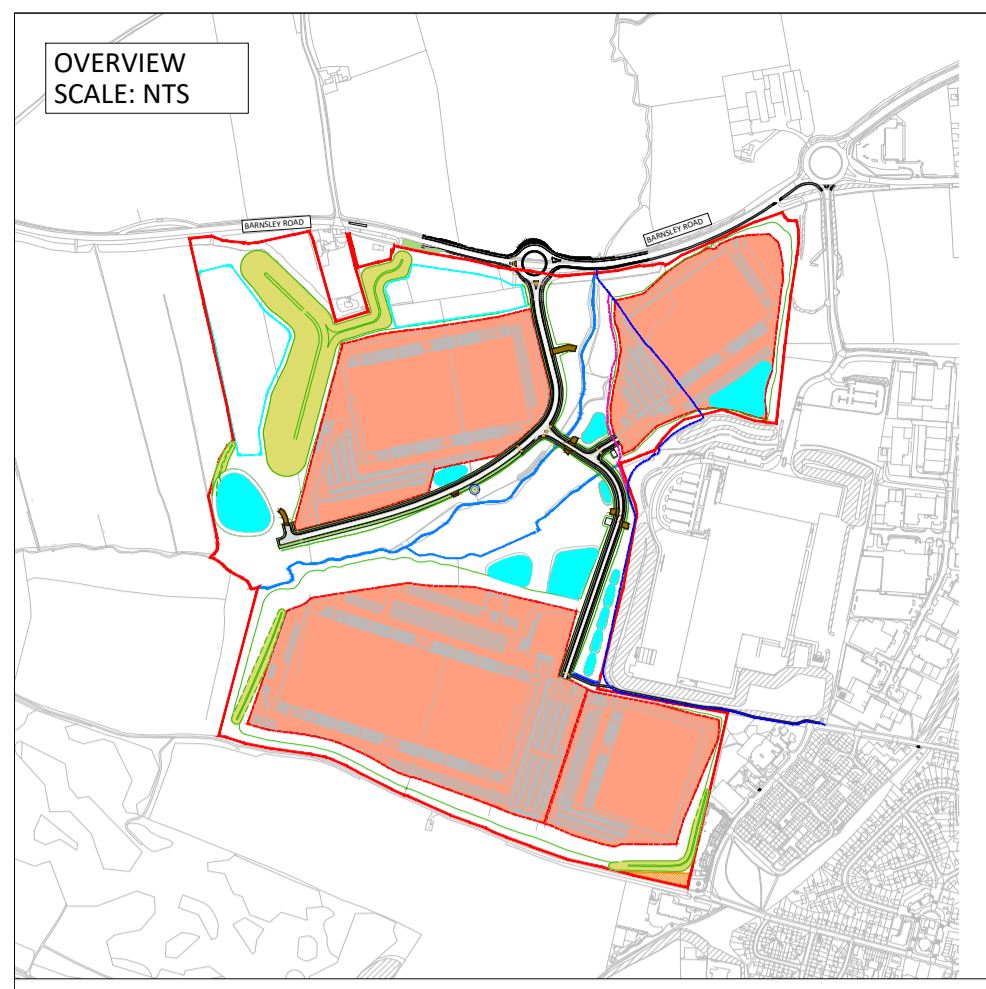
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SCHEDULE 1 – PLAN 5 (ELEVATIONS OF RELEVANT HABITABLE ROOMS OF HICKLETON NOISE MITIGATION PROPERTIES)

Appendix B Hickleton Road Traffic Noise Significant Effect Façade Markup



SCHEDULE 1 – PLAN 6 (PROPOSED OFF SITE HIGHWAY IMPROVEMENT WORKS)



- Notes:**
1. All dimensions are to be checked on site before the commencement of works. Any discrepancies are to be reported to the Architect & Engineer for verification. Figured dimensions only are to be taken from this drawing.
 2. This drawing is to be read in conjunction with all relevant Engineers' and Service Engineers' drawings and specifications.
 3. For attenuation ponds and flood compensation area IL's and volumes, refer to drawings 23451-HYD-XX-XX-DR-D-0500 to 0505.
 4. Where buildings and plot layouts are shown these are indicative only for illustrative purposes. The layouts of the development plots will be subject to future Reserved Matters applications.

SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION

IN ADDITION TO THE HAZARDS/RISKS NORMALLY ASSOCIATED WITH THE TYPES OF WORK DETAILED ON THIS DRAWING, NOTE THE FOLLOWING

CONSTRUCTION

MAINTENANCE / CLEANING

DECOMMISSIONING / DEMOLITION

IT IS ASSUMED THAT ALL WORKS WILL BE CARRIED OUT BY A COMPETENT CONTRACTOR WORKING, WHERE APPROPRIATE, TO AN APPROVED METHOD STATEMENT

NOTES:

FOR THE AVOIDANCE OF DOUBT, THE INFORMATION SHOWN WITHIN THE DEVELOPMENT PLOTS IS INDICATIVE ONLY, AND WILL BE SUBJECT TO SUBSEQUENT RESERVED MATTERS APPLICATIONS

FOR FURTHER INSET DETAILS, SEE HYDROCK DRAWING : 23451-HYD-XX-XX-DR-D-0106

ALL WORKS OUTSIDE THE RED LINE BOUNDARY TO BE UNDERTAKEN AS PART OF A SECTION 106 CONTRIBUTION

Rev	Date	Description	By	Ckd
P6	09.01.25	Note added to southern bus stops	MB	AC
P5	31.10.24	Eastbound footway widening removed	MB	AC
P4	30.10.24	southern footway added, tactile crossing points amended, easterly bus stop relocated to existing position	MB	AC
P3	30.06.24	PROW upgrade route amended	SJ	AC
P2	20.06.24	Updated to location plan	JM	AC
P1	18.06.24	Planning issue	JM	AC



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 www.hydrock.com



Client:

BARNESLEY ROAD GOLDTHORPE

Drawing Title:

PROPOSED OFF SITE HIGHWAY IMPROVEMENT WORKS LOCATION PLAN

Drawing Status:

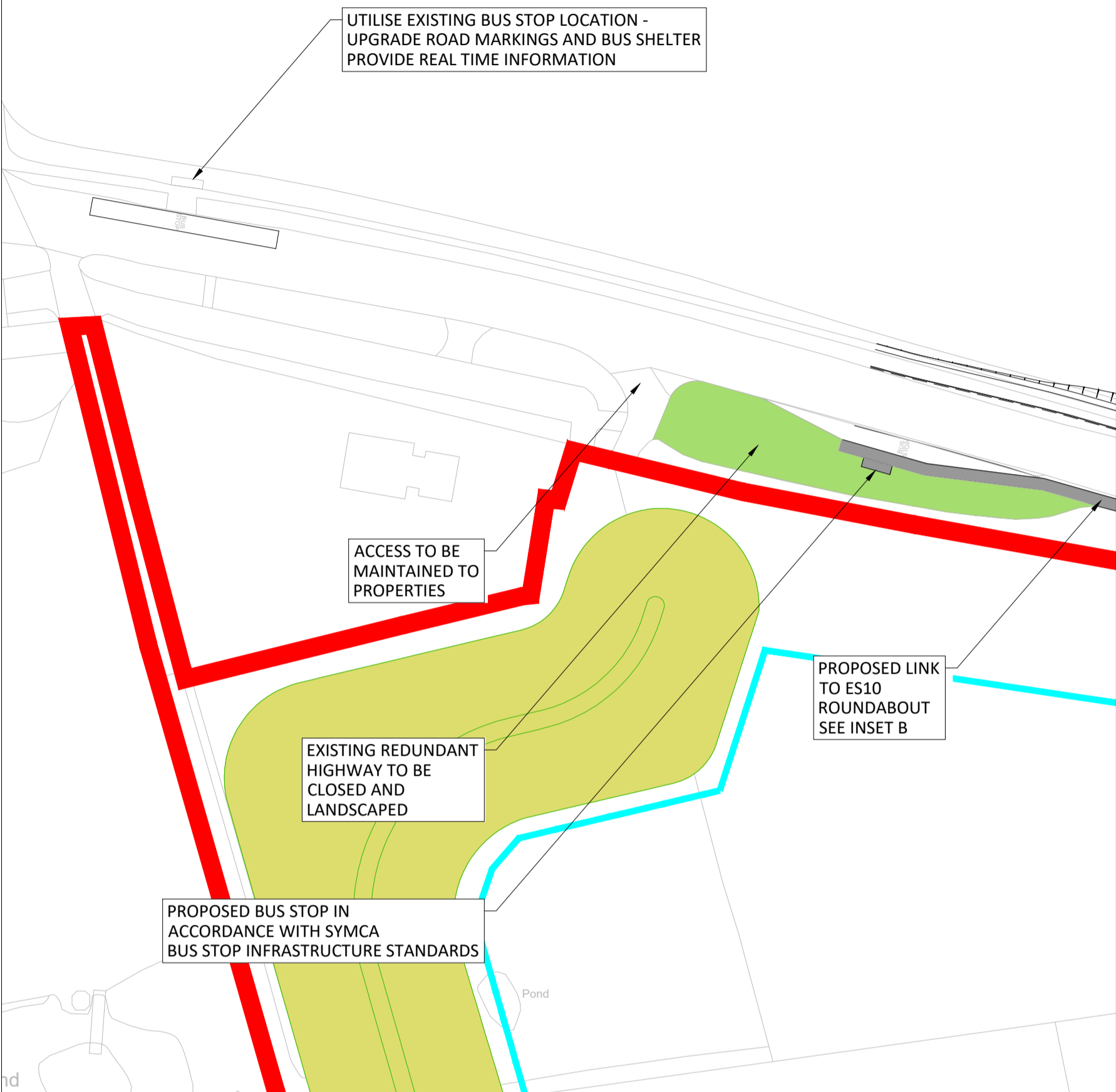
PLANNING

Hydrock Job No: **C23451**

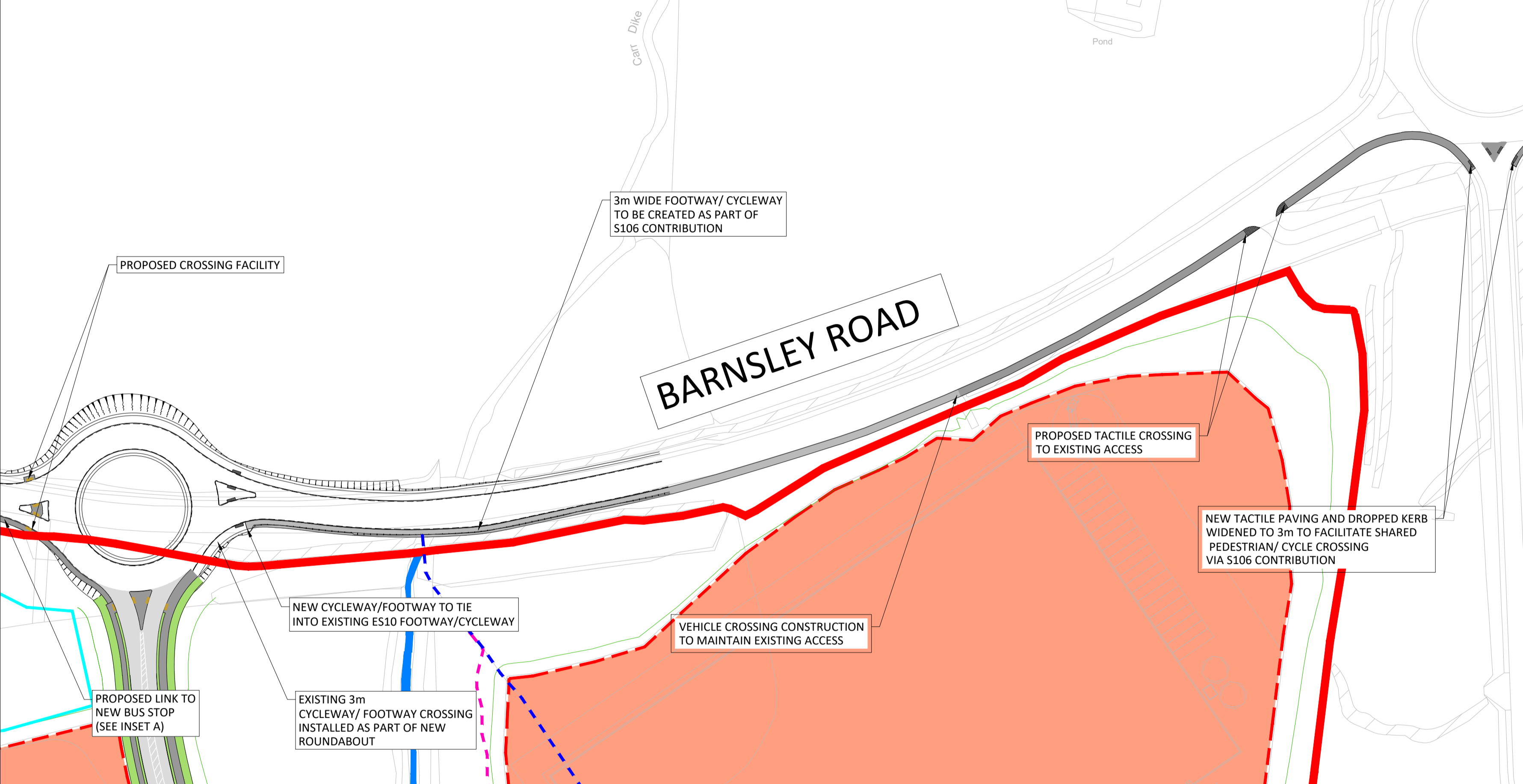
Drawn	Checked	Scale @ A1	Date	Issue Date
JM	AC	AS SHOWN	19.06.24	19.06.24

Drawing Number: **23451-HYD-XX-XX-DR-D-0105** Revisions: **P6**

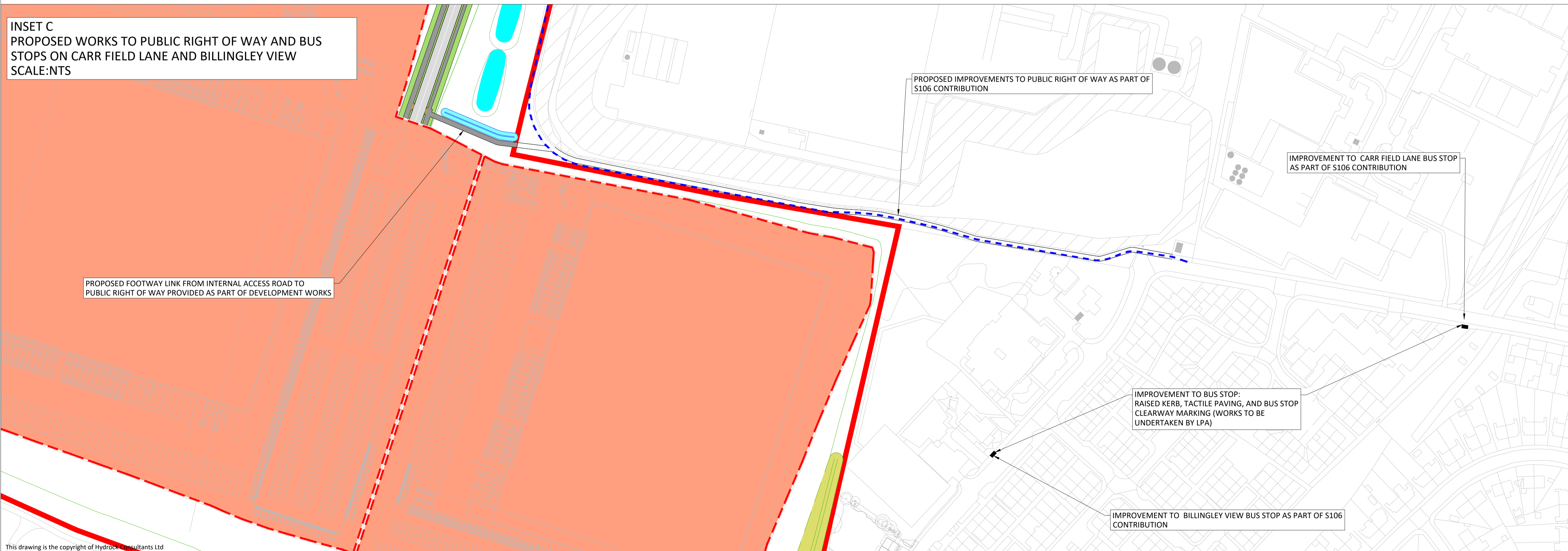
**INSET A
PROPOSED BUS STOPS
SCALE: 1:800**



**INSET B
UPGRADE TO ES10 ROUNDABOUT AND
UPGRADE TO HOLLY GROVE ROUNDABOUT
SCALE: 1:1250**



**INSET C
PROPOSED WORKS TO PUBLIC RIGHT OF WAY AND BUS STOPS ON CARR FIELD LANE AND BILLINGLEY VIEW
SCALE:NTS**



- Notes:**
- All dimensions are to be checked on site before the commencement of works. Any discrepancies are to be reported to the Architect & Engineer for verification. Figured dimensions only are to be taken from this drawing.
 - This drawing is to be read in conjunction with all relevant Engineers' and Service Engineers' drawings and specifications.
 - For attenuation ponds and flood compensation area IL's and volumes, refer to drawings 23451-HYD-XX-XX-DR-D-0500 to 0505.
 - Where buildings and plot layouts are shown these are indicative only for illustrative purposes. The layouts of the development plots will be subject to future Reserved Matters applications.

SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION

IN ADDITION TO THE HAZARDS/RISKS NORMALLY ASSOCIATED WITH THE TYPES OF WORK DETAILED ON THIS DRAWING, NOTE THE FOLLOWING

CONSTRUCTION

MAINTENANCE / CLEANING

DECOMMISSIONING / DEMOLITION

IT IS ASSUMED THAT ALL WORKS WILL BE CARRIED OUT BY A COMPETENT CONTRACTOR WORKING, WHERE APPROPRIATE, TO AN APPROVED METHOD STATEMENT

NOTES :

FOR THE AVOIDANCE OF DOUBT, THE INFORMATION SHOWN WITHIN THE DEVELOPMENT PLOTS IS INDICATIVE ONLY, AND WILL BE SUBJECT TO SUBSEQUENT RESERVED MATTERS APPLICATIONS

ALL WORKS OUTSIDE THE RED LINE BOUNDARY TO BE UNDERTAKEN AS PART OF A SECTION 106 CONTRIBUTION

P5	09.01.25	Note added to southern bus stop	MB	AC
P4	31.10.24	Eastbound footway widening removed	MB	AC
P3	30.10.24	southern footway added, tactile crossing points amended, easterly bus stop relocated to existing position	MB	AC
P2	29.06.24	PROW upgrade route amended	SJ	AC
P1	20.06.24	Planning issue	JM	AC
Rev	Date	Description	By	Ckd

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Hydrock

Client:

Project Title:

**BARNSELEY ROAD
GOLDTHORPE**

Drawing Title:

**PROPOSED OFF SITE
HIGHWAY IMPROVEMENT WORKS**

Drawing Status:

PLANNING

Hydrock Job No: **C23451**

Drawn	Checked	Scale @ A1	Date	Issue Date
JM	AC	AS SHOWN	19.06.24	19.06.24

Drawing Number: **23451-HYD-XX-XX-DR-D-0106** Revision: **P5**

SCHEDULE 2 - MITIGATION FOR ROSE VALLEY COTTAGE AND WOODBINE COTTAGE

1 INTERPRETATION

1.1 In this Schedule the following words shall have the following meanings:

<p>“Affected Property(ies)”</p>	<p>means:</p> <p>(a) the property known as Rose Valley Cottage, Goldthorpe identified edged red and labelled ‘Rose Valley Cottage’ on plan 22081 F0066 C attached to this Agreement as Plan 3 at Schedule 1; and</p> <p>(b) the property known as Woodbine Cottage, Goldthorpe identified edged red and labelled ‘Woodbine Cottage’ on plan 22081 F0066 C attached to this Agreement as Plan 3 at Schedule 1;</p>
<p>“Affected Property Cap”</p>	<p>means the sum of up to £55,000 (Fifty Five Thousand Pounds) representing the maximum funds available for Mitigation Payment(s) in respect of Affected Properties and of which at least £41,612.5 (Forty One Thousand Six Hundred and Twelve Pounds and Fifty Pence) shall be made available to Rose Valley Cottage and at least £13,387.50 (Thirteen Thousand Three Hundred and Eighty Seven Pounds and Fifty Pence) shall be made available to Woodbine Cottage PROVIDED THAT if the funds claimed by one of the Affected Properties is less than the Affected Property Cap for that Affected Property, the relevant residual balance shall if necessary be made available to the other Affected Property;</p>
<p>“Interested Person(s)”</p>	<p>means the owners and occupiers of any Affected Property</p>
<p>“Mitigation Assurance”</p>	<p>means a contractually binding commitment by an Interested Person to use the whole of any Mitigation Payment received from the Owner to pay for the Mitigation Works (such Mitigation Works to include enhanced glazing to the windows of Relevant Habitable Rooms) to be carried out at their Affected Property and not for any other purpose</p>
<p>“Mitigation Claim Period”</p>	<p>means the 24 (Twenty Four) month period from the date of the first approval of a Reserved Matters Application</p>
<p>“Mitigation Notice”</p>	<p>means written notice to be given by the Owner to every Interested Person setting out:</p> <p>(a) Their ability to claim a Mitigation Payment from the Owner at any time during the Mitigation Claim Period;</p>

	<p>(b) The start and end dates (whether fixed or anticipated) of the Mitigation Claim Period;</p> <p>(c) The name and address of the individual to whom the claim for the Mitigation Payment should be made; and</p> <p>(d) The details that the Interested Party must provide in order to receive a Mitigation Payment including the need to provide relevant Mitigation Quotes</p>
“Mitigation Payment”	means the payment to be made by the Owners to an Interested Person of a sum equivalent to the cost of carrying out the Mitigation Works at their property as shall be evidenced by the Mitigation Quotes submitted as part of a Valid Mitigation Claim subject to a maximum of (£1,750) One Thousand Seven Hundred and Fifty Pounds per window of the Relevant Habitable Rooms of the Affected Property
“Mitigation Works”	means the noise insulation to the Affected Property comprising enhanced glazing to the windows of the Relevant Habitable Room of the Affected Property and the installation of fencing within the boundary of Rose Valley Cottage, Goldthorpe
“Mitigation Quote”	Means a quote obtained by an Interested Person from a relevant organisation or individual specialised in the installation of windows or the erection of fencing as the case may be to undertake the Mitigation Works at the Interested Person’s Affected Property
“Relevant Habitable Rooms”	means living rooms or bedrooms within the Affected Properties that contain windows which are located in the front elevation of the respective Affected Property
“Valid Mitigation Claim”	<p>means a claim for a Mitigation Payment to be made in writing by an Interested Person to the Owners within the Mitigation Claim Period in response to a Mitigation Notice and which shall include:</p> <p>(a) At least one Quote; and</p> <p>(b) A Mitigation Assurance signed by the Interested Person;</p>

2 NOISE INSULATION

2.1 Prior to the date of submission of the first Reserved Matters Application the Owners shall:

2.1.1 Use reasonable endeavours to identify the Interested Persons to whom the Mitigation Notice is to be given in accordance with this Schedule;

2.1.2 Submit to the Council for approval:

- (a) details of the Interested Persons identified in accordance with paragraph 2.1.1;
- (b) the form of Mitigation Notice to be issued to such Interested Persons; and
- (c) the form of Mitigation Assurance that each Interested Person shall be required to submit to the Owners as part of a Valid Mitigation Claim.

- 2.2 The Owners shall not submit the first Reserved Matters Application unless and until they have complied with the requirements of paragraph 2.1 and the Council has approved the details submitted in accordance with paragraph 2.1.2 PROVIDED THAT IF the Council fails to respond to the information required by paragraph 2.1.2 of Schedule 2 within the timeframe set out in paragraph 1 of Schedule 9 it shall be deemed that the Council has approved the information required by paragraph 2.1.2 of Schedule 2.
- 2.3 Within 10 (Ten) Working Days of the first approval of a Reserved Matters Application the Owner shall issue the Mitigation Notice approved by the Council to every Interested Person by guaranteed delivery (tracked).
- 2.4 The Owners shall keep a written record of all Mitigation Notices issued in accordance with this Schedule all responses including all Valid Mitigation Claims received from the Interested Persons to such Mitigation Notices and the Mitigation Payments made.
- 2.5 The Owners shall make available to the Council upon reasonable written request a copy of the written record maintained under paragraph 2.4 together with copies of the Mitigation Notices and responses so recorded.
- 2.6 The Owners shall arrange for payment of the Mitigation Payment to every Interested Person from whom the Owners receive a Valid Mitigation Claim within 28 days of such acceptance PROVIDED ALWAYS THAT the total of the Mitigation Payments shall not exceed the Affected Property Cap.
- 2.7 In the event that any Interested Person has not responded to the Mitigation Notice within 6 months of the date of its issue, the Owners shall issue a further letter to all Interested Persons who have not responded enclosing a copy of the Mitigation Notice and this process shall be repeated every 6 (six) months thereafter until and including the date six months prior to the end of the Mitigation Claim Period.
- 2.8 At the expiry of the Mitigation Claim Period all Interested Persons who have not submitted a Valid Mitigation Claim shall cease to be eligible for Mitigation Payments.

SCHEDULE 3 - MITIGATION FOR PROPERTIES IN HICKLETON

1 INTERPRETATION

1.1 In this Schedule the following words shall have the following meanings:

“Eligible Property(ies)”	means a residential dwelling or other building used for residential purposes shown outlined in red on the plan attached to this Agreement labelled Hickleton Noise Mitigation Fund – Eligible Properties (drawing number 22081 L0002 B) attached to this Agreement as Plan 4 at Schedule 1 that are likely to be subject to a significant effect arising from road traffic noise associated with the Development
“Eligible Properties Cap”	means the sum of up to £233,000 (Two Hundred and Thirty Three Thousand Pounds) representing the maximum funds available for Noise Insulation Payment(s) in respect of Eligible Properties
“Eligible Person(s)”	means the owners and occupiers of any Eligible Property
“GDPO”	means the Town and Country Planning (General Permitted Development) (England) Order 2015
"Joint Approval"	means any notice, approval, consent, certificate, direction, authority, agreement, action, expression of satisfaction required to be given or reached or taken by the Joint Approval Panel or any response requested pursuant to this Schedule and "Jointly Approve" and other cognate expressions shall be construed accordingly
"Joint Approval Panel"	means a panel comprising one representative from the Council and one representative from the City Council and formed in order to assess and consider matters which are subject of a Joint Approval required by both the Council and the City Council pursuant to the terms of this Deed
“Listed Building”	means a building included in the List of Buildings of Special Architectural or Historic Interest compiled by the Department of Digital, Culture, Media and Sports pursuant to the Planning (Listed Buildings and Conservation Areas) Act 1990
“Listed Building Consent”	means a consent for works to be carried out to a Listed Building required under the provisions of the Planning (Listed Buildings and Conservation Areas) Act 1990
“Noise Insulation Assurance”	means a contractually binding commitment by an Eligible Person to use the whole of any Noise Insulation Payment received from the Owner to

	pay for the Noise Insulation Works to be carried out at their Eligible Property and not for any other purpose
“Noise Insulation Claim Period”	means the 24 (Twenty Four) month period from the date of commencement of Above Ground Works of the Unit which will exceed the Trigger Floorspace
“Noise Insulation Notice”	means written notice to be given by the Owner to every Eligible Person setting out: <ul style="list-style-type: none"> (a) Their ability to claim a Noise Insulation Payment from the Owners at any time during the Noise Insulation Claim Period; (b) The start and end dates of the Noise Insulation Claim Period; (c) The name and address of the individual to whom the claim for the Noise Insulation Payment should be made; (d) The details that the Eligible Person must provide in order to receive a Noise Insulation Payment including the need to provide relevant Noise Insulation Quotes with confirmation that the Noise Insulation Works the subject of the Noise Insulation Quote will be works which do not materially affect the external appearance of the Eligible Property
“Noise Insulation Payment”	means the payment to be made by the Owners to the Eligible Person of a sum equivalent to the cost of carrying out the Noise Insulation Works at the property concerned subject to a maximum of £1,000 (One Thousand Pounds) per window which requires enhanced double glazing and £750 (Seven Hundred and Fifty Pounds) per window which requires secondary glazing (“Maximum Payment Per Window”) to the Relevant Habitable Rooms of the Eligible Property together with the anticipated costs of obtaining any Listed Building Consent required for the works
“Noise Insulation Works”	means the noise insulation works to the Eligible Property comprising enhanced glazing or secondary glazing to Relevant Habitable Rooms and which shall only be works that do not constitute development under s55(2) of the Act nor materially affect the external appearance of the Eligible Property such that they do not comply with Schedule 2 Part 1 Class A condition A3 of the GPDO

“Noise Insulation Quote”	means a quote obtained by an Eligible Person from a relevant organisation or individual specialised in the installation of windows to undertake the Noise Insulation Works at the Eligible Person’s Eligible Property and which shall include confirmation that the Noise Insulation Works will not materially affect the external appearance of the Eligible Property and the cost of obtaining any Listed Building Consent required for the works concerned
“Relevant Habitable Rooms”	means lounges or bedrooms within the elevations of Eligible Properties identified as having ‘significant effects predicted’ on the plan attached to this Agreement labelled Hickleton Road Traffic Noise Significant Effect Façade Markup attached to this Agreement as Plan 5 at Schedule 1
“Trigger Floorspace”	means the cumulative floor area of the Development exceeding 100,000sqm
“Valid Noise Insulation Claim”	means a claim for a Noise Insulation Payment to be made in writing by an Eligible Person to the Owners within the Noise Insulation Claim Period in response to a Noise Insulation Notice and which shall include: (a) At least one Noise Insulation Quote; (b) The anticipated costs of obtaining any Listed Building Consent required for the works; and (c) A Noise Insulation Assurance signed by the Eligible Person

2 NOISE INSULATION

2.1 Prior to the date of submission of the first Reserved Matters Application for Unit(s) where the proposed floorspace exceeds the Trigger Floorspace the Owners shall:

2.1.1 Use reasonable endeavours to identify the Eligible Persons to whom the Noise Insulation Notice is to be given in accordance with this Schedule;

2.1.2 Submit to the Council and City Council for a Joint Approval:

- (a) details of the Eligible Persons identified in accordance with paragraph 2.1.1;
- (b) the form of Noise Insulation Notice to be issued to such Eligible Persons; and
- (c) the form of Noise Insulation Assurance that each Eligible Person shall be required to submit to the Owners as part of a Valid Noise Insulation Claim.

2.2 The Owners shall not submit the first Reserved Matters Application for Unit(s) where the proposed floorspace exceeds the Trigger Floorspace unless and until they have complied with the requirements of paragraph 2.1 and the Joint Approval has been issued in accordance with paragraph 2.1 of Schedule 3 and paragraph 1 of Schedule 9 PROVIDED THAT IF the Council or City Council fails to

respond to the information required by paragraph 2.1.2 of Schedule 3 within the timeframe set out in paragraph 1 of Schedule 9 it shall be deemed that the Council or City Council as relevant has approved the information required by paragraph 2.1.2 of Schedule 3.

- 2.3 Within 10 (Ten) Working Days of commencement of Above Ground Works to the Unit that shall exceed the Trigger Floorspace the Owners shall issue the Noise Insulation Notice to all Eligible Persons by guaranteed delivery (tracked).
- 2.4 The Owners shall keep a written record of all Noise Insulation Notices issued in accordance with this Schedule and all responses including all Valid Noise Insulation Claims received from the Eligible Persons to such Noise Insulation Notices and the Noise Insulation Payments made and shall make the same available to the Council or City Council upon written request.
- 2.5 The Owners shall arrange for payment of the Noise Insulation Payment to every Eligible Person from whom the Owners receive a Valid Noise Insulation Claim within 28 days of such Valid Noise Insulation Claim PROVIDED ALWAYS THAT the total of the Noise Insulation Payments shall not exceed the Eligible Properties Cap.
- 2.6 In the event that any Eligible Person has not responded to the Noise Insulation Notice within 6 months of the date of its issue, the Owners shall issue a further letter to all Eligible Persons who have not responded enclosing a copy of the Noise Insulation Notice and this process shall be repeated every 6 (Six) months thereafter until and including the date six months prior to the end of the Noise Insulation Claim Period.
- 2.7 At the expiry of the Noise Insulation Claim Period, subject to paragraph 2.8, all Eligible Persons who have not submitted a Valid Noise Insulation Claim shall cease to be eligible for Noise Insulation Payments.
- 2.8 If at the expiry of the Noise Insulation Claim Period the aggregate of all Noise Insulation Payments is less than the Eligible Properties Cap, then the Owners shall make any residual balance within the Eligible Properties Cap available to any one or more Eligible Person(s) (if necessary on a pro rata basis) where the Noise Insulation Quote(s) provided within that Eligible Person's Valid Noise Insulation Claim is greater than the Maximum Payment Per Window.

SCHEDULE 4 - HICKLETON MITIGATION

1 INTERPRETATION

1.1 In this Schedule the following words shall have the following meanings:

“A19 – A1 Hickleton Bypass”	means the proposed future Hickleton Bypass between the A19 and the A1 which seeks to alleviate traffic flows through Hickleton
“Air Quality Improvements”	means improvements undertaken by the City Council to mitigate the impact of air pollution within the settlement of Hickleton
“Crossroads Improvements”	means the works of improvement to the Red Hill Land and Hickleton Road Junction to address the impacts of the Development
“Mitigation Contribution”	<p>means the sum of £436,482.73 (Four Hundred and Thirty Six Four Hundred and Eighty Two Pounds and Seventy Three Pence) payable by the Owners to the City Council towards the A19 – A1 Hickleton Bypass for the purpose of mitigating the impacts of the Development on the air quality of Hickleton</p> <p>PROVIDED THAT in the event that the City Council reasonably considers that the A19 – A1 Hickleton Bypass is unlikely to come forward within 10 years of the payment of the final tranche of the Mitigation Contribution, the Mitigation Contribution may be used toward the Crossroads Improvements and/or the Air Quality Improvements for the purpose of mitigating the impacts of the Development on the air quality of Hickleton which, for the avoidance of doubt, can include improvements to the highway network</p>
“Red Hill Land and Hickleton Road Junction”	Means the junction where Red Hill Land and Hickleton Road meets the A635 (Doncaster Road)

2 MITIGATION

- 2.1 Prior to Above Ground Works the Owners shall pay to the City Council 50% of the Mitigation Contribution and shall not permit or allow Above Ground Works until 50% of the Mitigation Contribution has been paid to the City Council.
- 2.2 Prior to first Occupation the Owners shall pay to the City Council the remaining 50% of the Mitigation Contribution and shall not cause or permit first Occupation until the Mitigation Contribution has been paid in full.

SCHEDULE 5 - TRANSPORTATION

1 INTERPRETATION

1.1 In this Schedule the following words shall have the following meanings:

“Bus Services”	means the off peak bus services that serve the Development
“Bus Services Contribution”	means the sum of £471,321 (Four Hundred and Seventy One Thousand Three Hundred and Twenty One Pounds) payable by the Owners to the Council for the purpose of the Bus Services Enhancements
“Bus Services Enhancements”	means the enhancements proposed to the Bus Services to improve public transport connectivity related to the Development

2 MITIGATION

2.1 The Owners shall pay the Bus Services Contribution to the Council in accordance with the following and subject to paragraph 2.2 of this Schedule:

- 2.1.1 £157,107 (One Hundred and Fifty Seven Thousand One Hundred and Seven Pounds) prior to first Occupation;
- 2.1.2 £157,107 (One Hundred and Fifty Seven Thousand One Hundred and Seven Pounds) upon the second annual anniversary of first Occupation;
- 2.1.3 £157,107 (One Hundred and Fifty Seven Thousand One Hundred and Seven Pounds) upon the third annual anniversary of first Occupation;

2.2 In the event that it is demonstrated to the reasonable satisfaction of SYMCA that the Bus Services are shown by the information obtained by SYMCA in accordance with paragraph 7.2 of the Ninth Schedule to:

- 2.2.1 Have become self-funding through fare patronage within 3 years from first Occupation then the Owner's obligation to pay the Bus Services Contribution shall cease and determine absolutely
- 2.2.2 Have made a profit during the preceding 12 months as demonstrated by annual accounts of the Bus Services provider then that profit will be offset against the part of the Bus Services Contribution that is next payable in accordance with paragraph 2.1 of this Schedule

SCHEDULE 6 - OFF-SITE HIGHWAY IMPROVEMENTS

1 INTERPRETATION

1.1 In this Schedule the following words shall have the following meanings:

“A635 Footway/Cycleway Contribution”	means the sum of £322,200 (Three Hundred and Twenty Two Thousand Two Hundred Pounds) payable by the Owners to the Council toward the cost of constructing a shared use footway/cycleway along the southern kerbline of the A635 as shown shaded grey on Plan 6
“Bus Layby Contribution”	means the sum of £223,058 (Two Hundred and Twenty Three Thousand and Fifty Eight Pounds) payable by the Owners to the Council toward the cost of the Council constructing a bus stop and western footpath along the northern boundary of the Site as shown on Plan 6
“Bus Stop Contribution”	means the sum of £71,242 (Seventy One Thousand Two Hundred and Forty Two Pounds) payable by the Owner to the Council toward the cost of bus stop enhancements (to include but not limited to the provision of electronic real time enabled bus shelters) that serve the Development
“Plan 6”	means the Plans labelled “Proposed Off Site Highway Improvement Works” attached to this Agreement as Plan 6 at Schedule 1
“PRoW Contribution”	means the sum of £402,374.64 (Four Hundred and Two Thousand Three Hundred and Seventy Four Pounds and Sixty Four Pence) payable by the Owners to the Council comprising £230,180.17 (Two Hundred and Thirty Thousand One Hundred and Eighty Pounds and Seventeen Pence) towards the costs of the Council undertaking improvements to the lighting of the existing public rights of way shown with the dashed blue line on Plan 6 and £172,194.47 (One Hundred and Seventy Two Thousand One Hundred and Ninety Four Pounds and Forty Seven Pence) towards the costs of the Council undertaking improvements and upgrading of the existing public right of way shown with the dashed blue line on Plan 6

2 MITIGATION

- 2.1 Prior to Above Ground Works the Owners shall pay to the Council the A635 Footway/Cycleway Contribution, the Bus Layby Contribution and the PRoW Contribution.
- 2.2 The Owners shall not permit or allow Above Ground Works until the A635 Footway/Cycleway Contribution, the Bus Layby Contribution and the PRoW Contribution have been paid to the Council.
- 2.3 Prior to Above Ground Works the Owners shall pay to the Council the Bus Stop Contribution.

2.4 The Owners shall not permit or allow Above Ground Works until the Bus Stop Contribution has been paid to the Council.

SCHEDULE 7 - BIODIVERSITY AND LANDSCAPE

1 INTERPRETATION

1.1 In this Schedule the following words shall have the following meanings:

<p>“BEMP”</p>	<p>Means a biodiversity enhancement management plan for the Development completed by a suitably qualified ecologist will be submitted to the Council prior to the commencement of landscaping works on site. The BEMP will include the following:</p> <ul style="list-style-type: none"> o A landscape plan detailing the location of mitigation works including habitat and species mitigation to be undertaken; o An indicative timetable of delivery for each habitat/linear feature created and/or enhanced; o A schedule of ecological monitoring for a minimum 30 year period, identifying when key indicators of habitat/linear feature maturity should be achieved; o A schedule of actions to be undertaken in case signs of failing are identified; the schedules must include details of technique(s) to be used, equipment to be used, roles and relevant expertise of personnel and organisations involved and timing of actions including submission of monitoring reports to the Council; o Results of bird monitoring to be fed into the BEMP to inform adaptive management, if required in respect of marsh harrier; and o Details on the monitoring of habitats and linear features and the provision of a report, which shall be provided to the Council on the 1st November of each year of monitoring (years one-three after creation, years five, ten and every ten years thereafter), which will assess the condition of all habitats and linear features and faunal features created and/or enhanced and any necessary management or replacement/remediation measures required.
<p>“Biodiversity Impact Assessment”</p>	<p>means an assessment to be undertaken for each Phase to calculate the biodiversity impact of the that Phase measured in the Biodiversity Units using the statutory biodiversity metric published by the Department for Environment Food & Rural Affairs (“DEFRA”) dated February 2024 or any</p>

	other superseding metric published by DEFRA or Natural England from time to time to measure and account for biodiversity losses and gains resulting from development or land management change (or in the absence of any metric published by Natural England or DEFRA such other metric as may be agreed in writing by the Owners and the Council)
“Biodiversity Impact Assessment Report”	means the report produced for each Phase detailing the Biodiversity Impact Assessment for that Phase including the Biodiversity Impact Assessment dated August 2024 relates to the Full Permission Development and is attached at Appendix 1
“Biodiversity Unit”	means the measure of biodiversity resource as quantified and assessed in accordance with the Biodiversity Impact Assessment
“LEMP Framework”	means the Framework Landscape and Ecology Management Plan dated November 2024 and attached to this Deed at Appendix 2
“Phase LEMP”	<p>the habitat management and monitoring plan for each Phase based on the LEMP Framework, BEMP, detailing how that Phase will contribute to providing a minimum 10% net gain in Biodiversity Units for the Development in accordance with the Biodiversity Impact Assessment Report and may provide for biodiversity enhancements to be provided within that Phase.</p> <p>Each Phase LEMP should include information on the following;</p> <ul style="list-style-type: none"> o Project information, funding and any legal agreements o Summary of Habitat Proposal and Plans, site boundary map, site context map o Roles & Responsibilities o Land use summary, site context photographs, site baseline and environmental information checklist and environmental information o Management plan aims and objectives, design principles informed by baseline information o Habitat and condition targets, habitat retention, habitat retention and protection measures map

	<ul style="list-style-type: none"> o Creation, enhancement and management targets and prescriptions o Habitat creation, enhancement and management – risk register and remedial measures o Monitoring methods and intervals, monitoring reports and adaptive management.
“Skylark Plot Contribution”	the sum of no less than £23,619.63 (Twenty Three Thousand Six Hundred and Nineteen Pounds and Sixty Three Pence) payable by the Owner to the Council for the provision, maintenance and management of skylark plots for a period of not less than 30 years, to be provided by a third party on instruction by the Council of plots within the vicinity of the Site which are designed to encourage skylarks foraging

2 MITIGATION

- 2.1 The Owners shall not cause or allow Commencement of Development until the BEMP has been submitted and approved in writing by the Council acting reasonably
- 2.2 The Owners shall not cause or allow Commencement of Development within each Phase until the Biodiversity Impact Assessment Report and the Phase LEMP for that Phase has been submitted to and approved in writing by the Council acting reasonably
- 2.3 The Owners shall implement each Phase LEMP to the satisfaction of the Council prior to first Occupation of the relevant Phase PROVIDED THAT if the Council fails to respond to the Owners’ request for confirmation that the specific Phase LEMP has been implemented to the satisfaction of the Council within 20 Working Days then then the Owners shall be permitted to cause or allow Occupation provided the Owner complies with the Phase LEMP
- 2.4 The Owners shall not cause or allow first Occupation of each Phase LEMP prior to implementation of each Phase LEMP to the satisfaction of the Council PROVIDED THAT if the Council fails to respond to the Owners request for confirmation that the specific Phase LEMP has been implemented to the satisfaction of the Council within 20 Working Days then the Owners shall be permitted to cause or allow Occupation provided the Owner complies with the Phase LEMP
- 2.5 The Owners shall maintain each Phase of the Development in accordance with the relevant Phase LEMP for not less than 30 (thirty) years from first Occupation of that Phase.
- 2.6 For the avoidance of doubt it is hereby agreed by the Owners and the Council that if the Biodiversity Impact Assessment Report and Phase LEMP for any Phase identifies that it will generate Biodiversity Units in excess of the 10% net gain for that Phase then any excess Biodiversity Units may be taken into account for the purposes of calculating the percentage net gain in Biodiversity Units pursuant to the Biodiversity Impact Assessment Report for any other Phase or for the purposes of registering the Site on the Biodiversity Gain Sites Register as envisaged by Section 100 of the Environment Act 2021 and created by DEFRA to enable any excess Biodiversity Units to be traded and in such circumstances the Owners shall be entitled to request that the Council enter a further agreement under s106 of the Act to secure the necessary obligations to ensure the Site can be registered on the Biodiversity Gain Sites Register

- 2.7 The Owners shall pay the Skylark Plot Contribution to the Council prior to the Commencement of Development and not cause permit or suffer the Commencement of Development until the Skylark Plot Contribution has been paid in full to the Council

SCHEDULE 8 - FLOOD MAINTENANCE REGIME

1 INTERPRETATION

1.1 In this Schedule the following words shall have the following meanings:

“Flood Mitigation Maintenance Strategy”	means the proposed maintenance strategy for flood mitigation contained in the ‘Technical Design Note: Flood Mitigation System – proposed maintenance’ with reference 23451-HYD-XX-XX-RP-D-0005 P1 prepared by Stantec and dated 20 January 2025 attached to this Agreement as Appendix 3 which details the maintenance requirements for the flood mitigation system including the proposed culvert system
“Flood Mitigation Infrastructure”	means the culverts, drainage channels, flood basis, gullies, headwalls, kerb drains, ponds, surface water manholes, trash screens, and other associated apparatus and infrastructure detailed in the Flood Mitigation Maintenance Strategy
“Management Company”	means the body to be appointed by the Owner to be responsible for the maintenance of the Flood Mitigation Infrastructure in accordance with the Flood Mitigation Maintenance Strategy

2 MITIGATION

2.1 The Owners covenant to at all times following Commencement of Development comply with the Flood Mitigation Maintenance Strategy for the lifetime of the Development.

2.2 Prior to first Commencement of Development, the Owners shall submit to the Council for approval details of the Management Company and shall not Commence Development unless and until the details of the Management Company have been approved in writing by the Council

2.3 The details of the Management Company referred to in paragraph 2.2 of this Schedule shall include:

2.3.1 corporate structure;

2.3.2 registered office and correspondence address;

2.3.3 directors and officers;

2.3.4 means of funding as necessary to demonstrate that the Management Company has sufficient financial means to maintain the Flood Mitigation Infrastructure in accordance with the Flood Mitigation Maintenance Strategy for the lifetime of the Development;

2.3.5 proposed banking arrangements; and

2.3.6 insurances as shall be appropriate in respect of the maintenance obligations of the Management Company.

2.4 The Owners shall set up the Management Company in accordance with the details approved by the Council (or any subsequent details approved in writing by the Council) prior to first Occupation of any Unit.

SCHEDULE 9 - COVENANTS OF THE COUNCIL CITY COUNCIL AND SYMCA

- 1 The Council shall consider the information submitted under paragraph **Error! Reference source not found.** of **Error! Reference source not found.** confirm to the Owner that the information is acceptable or not within 60 (sixty) Working Days of receipt of the information.
- 2 The Council and the City Council acting as the Joint Approval Panel shall consider the information submitted under paragraph 2.1.2 of Schedule 3 and confirm to the Owner that the information is acceptable or not within 60 (sixty) Working Days of receipt of the information.
- 3 If at any time the City Council shall in its discretion decide not to utilise any the Mitigation Contribution paid under this Deed in part or as to the whole or any it shall not have been expended or committed to use within 10 (ten) years from the date of receipt then the City Council shall refund to the Owners upon request whatever part of any contribution remains unspent as at such 10 year date.
- 4 If at any time the Council shall in its discretion decide not to utilise any contribution paid to the Council under this Deed in part or as to the whole or any contribution shall not have been expended or committed to use within 10 (ten) years from the date of receipt of the relevant contribution then the Council shall refund to the Owners upon request whatever part of any contribution remains unspent as at such 10 year date
- 5 If the Council receives any one or more of the contributions referred to at paragraph 2.1 of Schedule 5 or paragraph 2.3 of Schedule 6 the Council shall transfer the relevant contributions to SYMCA as soon as reasonably practicable after receipt.
- 6 Subject to paragraph 7 below if at any time SYMCA shall in its discretion decide not to utilise any contribution paid under this Deed (and subject to receipt of the same by SYMCA) in part or as to the whole or any contribution shall not have been expended or committed to use within 10 (ten) years from the date of receipt of the relevant contribution then SYMCA shall refund to the Owners without delay whatever part of any contribution remains unspent as at such 10 year date
- 7 With regard to the Bus Services Contribution and subject to receipt of the same by SYMCA, SYMCA covenants as follows:
 - 7.1 To hold the Bus Services Contribution in an interest bearing account from the date of receipt of payment of each tranche of the Bus Services Contribution until the date of payment to the operator of the Bus Services (or successor body) ("the Operator")
 - 7.2 To pay the Bus Services Contribution to the Operator upon receipt of the written confirmation from the Operator that:
 - 7.2.1 the Bus Services have not become self-funding through fare patronage;
 - 7.2.2 if the Bus Services have made a profit during the preceding 12 months, it will detail such profit by reference to its annual accounts;
 - 7.2.3 it will apply the Bus Services Contribution for the purpose set out in this Deed;
 - 7.2.4 it will provide full details of the expenditure of the Bus Services Contribution on demand to SYMCA or to the Owners;
 - 7.2.5 it will return any uncommitted part of the Bus Services Contribution to SYMCA after the expiry of five years from the date of receipt of the final tranche of the Bus Services Contribution by SYMCA
 - 7.3 Upon written request of the Owners to repay to the Owners any unspent monies received by the SYMCA pursuant to paragraph 7.2.5 of this Schedule within 28 working days of receipt from the Operator

EXECUTED as a **DEED** by affixing)
the Common Seal of)
BARNSELY METROPOLITAN)
BOROUGH COUNCIL)

Borough Secretary/Authorised Signatory

EXECUTED as a **DEED** by)
WILLIAM SEELS)
in the presence of a witness:)

Signature:

Name of witness:

Address:

.....

.....

Occupation of witness:

EXECUTED as a **DEED** by)
RICHARD SEELS)
in the presence of a witness:)

Signature:

Name of witness:

Address:

.....

.....

Occupation of witness:

EXECUTED as a DEED by)
DEBORAH SEELS)
in the presence of a witness:)

Signature:

Name of witness:

Address:

.....

.....

Occupation of witness:

EXECUTED as a DEED by)
JONATHAN SEELS)
in the presence of a witness:)

Signature:

Name of witness:

Address:

.....

.....

Occupation of witness:

EXECUTED as a DEED by FREDERICKA)
ELIZABETH MARY LAUGHTON)
in the presence of a witness:)

Signature:

Name of witness:

Address:

.....

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Occupation of witness:

EXECUTED as a DEED by)
PAUL WHEELER)
in the presence of a witness:)

Signature:

Name of witness:

Address:

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Occupation of witness:

EXECUTED as a DEED by)
STAMFORD LAND LTD)
in the presence of a witness:)

Signature:

Name of witness:

Address:

.....

.....

Occupation of witness:

EXECUTED as a DEED by WENTWORTH)
TRUSTEE COMPANY LIMITED acting by)
WILLIAM JAMES RUFUS GETHING, a
Director)
in the presence of a witness:)

Signature:

Name of witness:

Address:

.....

.....

Occupation of witness:

EXECUTED as a DEED by)
GOLDTHORPE DEVELOPMENT)
PARTNERSHIP LLP)
in the presence of a witness:)

Signature:

Name of witness:

Address:

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Occupation of witness:

THE COMMON SEAL of
CITY OF DONCASTER COUNCIL
was here unto affixed in the presence of :-)

Authorised by the Service Director
of Legal and Democratic Services
No. in Seal Register

EXECUTED AS A DEED by affixing the common seal of
SOUTH YORKSHIRE MAYORAL COMBINED AUTHORITY
in the presence of:

Authorised signatory
Director of Legal and Governance (Monitoring Officer)

APPENDIX 1 - BIODIVERSITY NET GAIN REPORT FOR FULL DEVELOPMENT



Equites Newlands (Goldthorpe) Ltd.

Land off Barnsley Road, Goldthorpe

BIODIVERSITY NET GAIN REPORT

August 2024

PCR Environment and Design Ltd

Registered Office: Lockington Hall, Lockington, Derby DE74 2RH

Company No. 07128076. [T] 01509 672772 [E] mail@fpcr.co.uk [W] www.fpcr.co.uk

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Rev	Issue Status	Prepared / Date	Reviewed / Date	Approved / Date
-	Draft	SJH / PRA 21.08.23		RJS / 29.08.23
A	Issued – minor amendments	SJH / PRA 10.11.23	PRA 10.11.23	█
B	Issued – minor amendments specify allocation of BNG units	SJH / PRA 17.11.23	PRA 30.11.23	-
C	Issued – minor amendment to wording	SJH / PRA 17.11.23	PRA 01.12.23	-
D	Issued– update to SBM	SJH / PRA 12.08.24	-	RG / 12.08.24
E	FINAL – minor adjustments to significance criteria and amends to conditions	SJH / PRA 12.08.24 Updated PRA 12.11.24	-	-

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- Appendix A: Statutory Biodiversity Metric Calculation
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1.0 INTRODUCTION

- 1.1 This report has been prepared by FPCR Environment and Design Ltd on behalf of Newlands Developments (Equites Newlands (Goldthorpe) Ltd.) and relates to Land South of Dearne Valley Parkway, Goldthorpe, herein referred to as 'the Site'.
- 1.2 The submitted proposals relate to a hybrid planning application, where the shared space will be progressed as a full application and development areas will be progressed as outline and subject to future reserved matters.
- 1.3 This report is an update to the previously prepared Biodiversity Net Gain Report which used the DEFRA/Natural England Biodiversity Metric version 3.1, the previous calculation was carried out in June 2023 and the report issued in December 2023.
- 1.4 Since issue of the previous report minor changes have been made to the Site layout and proposed habitats, and the development areas (which will be part of the outline application) have been categorized as "commercial land" to provide these areas with a BNG value of zero. The individual development plots will be subject to additional BNG assessment at the reserved matters stage.
- 1.5 The previous calculation undertaken in metric version 3.1 has been transposed (with amendments) into the DEFRA Statutory Biodiversity Metric (SBM).
- 1.6 This report has been prepared with reference to the following documents:
- Ecological Appraisal, FPCR, 2023;
 - Illustrative Masterplan, Drawing No. 22081 F0045. UMC Architects, 2023 (Environmental Statement Figure 4.1).
 - Landscaping plans. Landscape Master Plan, Location Plan and Individual Plans. Reference: GDT-BCA-ELS-XX-DR-L-2267. Barry Chinn Associates Ltd. 2024.

Site Location and Context

- 1.7 The Site is centred on Ordnance Survey grid ref. SE 4414 0356 and lies to the west of the town of Goldthorpe on farmland, south of the A635 Barnsley/Doncaster Road and adjacent to the west of the Aldi Goldthorpe Regional Distribution Centre. Carr Dike bisects the Site flowing in a general south-westerly direction from Barnsley/Doncaster Road in the north-east of the Site. Dearne Valley Wetlands Site of Special Scientific Interest (SSSI) lies to the south-west with the land between dominated by large cultivated arable fields.
- 1.8 The Site at the time of survey, comprised predominately large arable fields with boundary features which include plantation woodland, Carr Dike (stream), a wet ditch (connecting to Carr Dike), and native hedgerows with associated mature trees. A small pond was located in the north of the Site adjacent to a small conifer plantation.

Site Proposals

- 1.9 Proposed development is for employment uses (B2 and B8) provided in four plots for development of commercial units, and associated works including provision of internal access roads, landscaping, and drainage/flood compensation areas.

Aims and Objectives

- 1.10 This Biodiversity Net Gain Report is based on the Chartered Institute of Ecology and Environmental Management (CIEEM) guidance¹. The scope and objectives of this report are to:
- Summarise the results of the baseline UKHab Survey undertaken on the Site and to present the results of habitat condition assessment surveys following the SBM Technical Guidance.
 - Provide an overview of the proposed habitats following completion of the scheme.
 - Present the results of the SBM assessment completed for the proposals.
 - Assess the feasibility of the proposals to achieve a net gain in biodiversity through the SBM.
 - Recommendations for the proposals to maximise their biodiversity potential.

Legislative and Policy Context

- 1.11 The UK Government, as signatory to the Rio Convention on Biological Diversity, is committed to conserving and enhancing biodiversity. This commitment is further enforced in the Natural Environment and Rural Communities Act (NERC) 2006 and the Natural Environment White Paper (June 2011).
- 1.12 DEFRA's 25 Year Environment Plan (2018) seeks to embed a 'net environmental gain' principle for development to deliver environmental improvements locally and nationally. Current policy is that the planning system should provide biodiversity net gains where possible; however, this is moving towards a mandatory requirement.
- 1.13 The NPPF (2021) in particular seeks to ensure that the planning system contributes to and enhances the natural and local environment, protect, and enhance biodiversity and geodiversity by:
- “174. d) minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures;*
- 179. b) promote the conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery of priority species; and identify and pursue opportunities for securing measurable net gains for biodiversity.”*

The Environment Act

- 1.14 Following the Environment Bill receiving Royal Assent in November 2021 mandatory biodiversity net gain is required under the Environment Act and was transposed into secondary legislation on 12th February 2024.
- 1.15 Part 6 of the Environment Act 2021 is entitled 'Nature and Biodiversity'. Within this part is section 98, entitled 'Biodiversity gain as condition of planning permission'. It says that 'Schedule 14 makes provision for biodiversity gain to be a condition of planning permission in England'. Part 1 of Schedule 14 contains the requirement for biodiversity net gain, including the requirement for 10%.

¹ CIEEM (2021) Biodiversity Net Gain Report and Audit Templates Chartered institute of Ecology and Environmental Management, Winchester, UK.

Measurable Net Gain

- 1.16 The Site is within an area allocated for development as employment land within the Barnsley Local Plan (Allocated Site ES10) and the requirements for the masterplan area within which the is located are that 10% biodiversity net gain will be provided (see Local Policy below for more detail).

Barnsley Local Policy

- 1.17 The site lies within the administrative area of Barnsley Metropolitan Borough Council (BMBC) and is covered by the Barnsley Local Plan² (adopted January 2019).
- 1.18 Whilst the Barnsley Local Plan has not adopted a policy for new developments to require a 10% net gain in biodiversity, objective 5 of the Local Plan aims to encourage an overall biodiversity net gain as follows: “*Protect and enhance Barnsley’s environmental assets and achieve net gains in biodiversity.*”
- 1.19 The Barnsley Local Plan identifies the area which includes the Site as part of the ES10 employment land allocation and includes the following description (with prescriptions relevant to biodiversity and ecology highlighted in bold);

“Site ES10 Land South of Dearne Valley Parkway 72.9 ha

The development will be subject to the production of a phased Masterplan Framework and will be expected to:

Protect and enhance biodiversity value including possible impacts on the Golden Plover population and on the nearby Old Moor RSPB reserve and ensure that the development avoids impacts or incorporates effective mitigation measures. Any impact on the golden plover habitat will be expected to be mitigated by either;

a. On-site creation of optimal agricultural conditions for fields to be retained; or

b. Creating suitable compensation habitat for the species off-site but nearby.

Provide a contribution towards improvements to biodiversity within the Dearne Valley Green Heart Nature Improvement Area;

Include the creation of a habitat corridor (at least 8m in width) along Carr Dike and a sustainable drainage scheme to ensure that rainwater falling on the site is still able to drain into the Dike aiming to improve water quality;

Improve the highway network to mitigate the impact of additional traffic generated by the development on surrounding roads and in particular effects on the A635 and other strategic road links to the A1/M and M1 motorways;

Provide appropriate access to housing site reference HS51 from Billingley View through the south-east corner of the site;

Retain the existing woodland and hedgerows on the site periphery;

Retain the section of hedgerow remaining in the north-west corner of the site;

Avoid locating any built development in Flood zones 2 and 3;

Safeguard the setting of the Billingley Conservation Area;

² Barnsley Local Plan January 2019. Available at: <https://www.barnsley.gov.uk/media/17249/local-plan-adopted.pdf>

Give consideration to Carr Dike and the connecting unnamed ordinary watercourse which run through the site; and

Provide an air quality assessment to assess the impacts of traffic emissions within air quality management areas along the A635 and other strategic road links to the A1/M and M1. Any adverse impacts on air quality should be mitigated in accordance with policy AQ1.

Archaeological remains are known to be present on this site. The site area has been reduced to allow flexibility in the development to ensure the remains can be preserved in situ if necessary.”

1.20 The above allocation is further considered within the Goldthorpe Masterplan Framework (ES10)³ which also states that biodiversity net gain of 10% will be sought through on-site or off-site compensation.

1.21 The following policies within the Barnsley Local Plan are relevant for achieving net gains in biodiversity (objective 5 of the Barnsley Local Plan): BIO1 Biodiversity and geodiversity; GI1 Green Infrastructure; CC4 Sustainable drainage systems; CC5 Water resource management.

1.22 Policy BIO1: Biodiversity and Geodiversity

“Development will be expected to conserve and enhance the biodiversity and geological features of the borough by:

Protecting and improving habitats, species, sites of ecological value and sites of geological value with particular regard to designated wildlife and geological sites of international, national, and local significance, ancient woodland and species and habitats of principal importance identified via Section 41 of the Natural Environment & Rural Communities Act 2006 (for list of the species and habitats of principal importance) and in the Barnsley Biodiversity Action Plan.

Maximising biodiversity and geodiversity opportunities in and around new developments.

Conserving and enhancing the form, local character, and distinctiveness of the boroughs natural assets such as the river corridors of the Don, the Dearne and Dove as natural floodplains and important strategic wildlife corridors.

Proposals will be expected to have followed the national mitigation hierarchy (avoid, mitigate, compensate) which is used to evaluate the impacts of a development on biodiversity interest.

Protecting ancient and veteran trees where identified.

Encouraging provision of biodiversity enhancements.

Development which may harm a biodiversity or geological feature or habitat, including ancient woodland and aged or veteran trees found outside ancient woodland, will not be permitted unless effective mitigation and/or compensatory measures can be ensured.

Development which adversely effects a European Site will not be permitted unless there is no alternative option and there are imperative reasons of overriding public interest (IROPI).”

1.23 The Barnsley Local Plan section 17: Green Infrastructure and Greenspace includes a section relating to the Dearne Valley Green Heart Nature Improvement Area (NIA), which states;

“Nature Improvement Areas (NIAs) are large, discrete areas that will deliver a step change in nature conservation, where a local partnership has a shared vision for their natural environment. The NIA

³ Goldthorpe Masterplan Framework v2.0 Sept. 2021 .
<https://www.barnsley.gov.uk/media/19799/goldthorpemasterplanframework.pdf>

grant scheme was established to help address ecological restoration as part of series of actions at a landscape scale to improve biodiversity, ecosystems and our connections with the natural environment identified by the Natural Environment White Paper (2011) and taking forward recommendations identified in the Lawton Review Making Space for Nature (2010). As set out in the Relationship with Plans and Strategies section, the Dearne Valley Green Heart has been designated as an NIA and its extent within Barnsley's boundary can be seen in the Green Infrastructure Diagram.

The Council expects to adopt an NIA Planning Advice Note which will encourage major developments to incorporate biodiversity enhancements in their proposals.”

1.24 Policy GI1: Green Infrastructure;

“We will protect, maintain, enhance, and create an integrated network of connected and multi-functional Green Infrastructure assets that:

Helps to meet the challenge of climate change;

Enhances biodiversity and landscape character;

and Secures and improves linkages between green and blue spaces;

At a strategic level Barnsley's Green Infrastructure network includes the following corridors which are shown on the Green Infrastructure Diagram: River Dearne Valley Corridor. River Dove Valley Corridor. River Don Valley Corridor. Dearne Valley Green Heart Corridor. Historic Landscape Corridor.

The network of Green Infrastructure will be secured by protecting open space, creating new open spaces as part of new development, and by using developer contributions to create and improve Green Infrastructure.”

1.25 Policy BIO1: Biodiversity and Geodiversity (relevant details below);

“Development will be expected to conserve and enhance the biodiversity and geological features of the borough by:

Protecting and improving habitats, species, sites of ecological value ... and species and habitats of principal importance identified via Section 41 of the Natural Environment & Rural Communities Act 2006) and in the Barnsley Biodiversity Action Plan.

Maximising biodiversity and geodiversity opportunities in and around new developments.

Conserving and enhancing the form, local character and distinctiveness of the boroughs natural assets....

Proposals will be expected to have followed the national mitigation hierarchy (avoid, mitigate, compensate) which is used to evaluate the impacts of a development on biodiversity interest.

Protecting ancient and veteran trees where identified.

Encouraging provision of biodiversity enhancements.

Development which may harm a biodiversity or geological feature or habitat, including ancient woodland and aged or veteran trees found outside ancient woodland, will not be permitted unless effective mitigation and/or compensatory measures can be ensured.”

- 1.26 The Barnsley Local Plan section 17: Green Infrastructure and Greenspace includes a section relating to the Dearne Valley Green Heart Nature Improvement Area (NIA), which states;

“Nature Improvement Areas (NIAs) are large, discrete areas that will deliver a step change in nature conservation, where a local partnership has a shared vision for their natural environment. The NIA grant scheme was established to help address ecological restoration as part of series of actions at a landscape scale to improve biodiversity, ecosystems and our connections with the natural environment identified by the Natural Environment White Paper (2011) and taking forward recommendations identified in the Lawton Review Making Space for Nature (2010). As set out in the Relationship with Plans and Strategies section, the Dearne Valley Green Heart has been designated as an NIA and its extent within Barnsley’s boundary can be seen in the Green Infrastructure Diagram.

The Council expects to adopt an NIA Planning Advice Note which will encourage major developments to incorporate biodiversity enhancements in their proposals.”

- 1.27 BMBC published a Supplementary Planning Document (SPD) related to Biodiversity and Geodiversity, which was adopted in May 2019. This document provides supplementary guidance related to Barnsley Local Plan policies BIO1, G11 and GS1.

The Biodiversity and Geodiversity SPD is currently in the process of being updated, and a consultation draft was issued in July 2023 but at the time of reporting this document was not adopted.

2.0 METHODOLOGY

Baseline Habitat Assessment

- 2.1 A survey of the Site was originally undertaken on 19th April 2022 by an FPCR ecologist with over 10 years' experience and a FISC Level 4 botanist. For each habitat recorded, a list of botanical species present was produced. This list is not considered to be exhaustive, but sufficient information was gained to ascertain broad habitats and features of interest present.
- 2.2 Since the field survey was completed, the boundary of the Site and the proposed development design have been revised and updated. As such, an additional survey was carried out on 12th January 2023 by an FPCR ecologist with FISC level 4 and over 6 years' experience, in order to assess habitats within areas not previously captured by the April 2022 survey.
- 2.3 The Site was assessed using the Phase 1 Habitat Survey Methodology (JNCC, 2010) and the UKHab Classification Methodology⁴ as recommended by Natural England⁵ and the Chartered Institute of Ecology and Environmental Management⁶. Condition assessments for each habitat following the stated criteria within the 3.1 Biodiversity Metric technical supplement⁷. The condition assessments were transposed into the Statutory Biodiversity Metric in August 2024.
- 2.4 A desk study was undertaken using free publicly available resources. Detailed results are provided in the Ecological Appraisal Report (FPCR 2023).
- 2.5 Hedgerows within the Site were assessed;
- In accordance with wildlife and landscape criteria contained within Part II of the Hedgerow Regulations 1997, to determine whether the hedgerow qualified as an 'Important Hedgerow'; and
 - In accordance with the Hedgerow Evaluation and Grading System (HEGS) to establish the conservation value of the hedgerows.
- 2.6 The above information was used to inform this Biodiversity Net Gain Assessment, utilising Natural England's Biodiversity Metric 3.1.

River Condition Assessment

- 2.7 The River Condition Assessment (RCA) field survey was completed on 7th and 14th June 2022 and was carried out by an FPCR ecologist with over 7 years' experience in ecological consultancy and accredited in conducting MoRPh field surveys, River Type desk studies, recording data using the RCA information system and interpreting RCA indicators and scores for baseline and post-intervention River Metric.
- 2.8 The survey was focused on the channel of Carr Dike, which flows through the centre of the Site from the north-east to south-west. The survey was conducted during low flow with weather

⁴ UK Habitat Classification Working Group. (2019). UK Habitat Classification. Available at: <http://ecountability.co.uk/ukhabworkinggroup-ukhab/> [Accessed 01/11/2019]. Now superseded with UKHab V2 Available at: <https://ukhab.org/> [Accessed 15/08/23]

⁵ Natural England, 2014. Protected species and development: advice for local planning authorities. (updated 2021) [online] Available at: <https://www.gov.uk/guidance/protected-species-how-to-review-planning-applications> [Accessed 05/03/2021]

⁶ CIEEM (2017) Guidelines for Preliminary Ecological Appraisal, 2nd edition. Chartered Institute of Ecology and Environmental Management, Winchester

⁷ Natural England, The biodiversity metric 3.1 Technical Supplement (2022) Available at: <https://nepubprod.appspot.com/publication/5850908674228224> [Accessed 15/08/2023]

conditions as <10% cloud cover, no rain, and a max temperature of 19°C and 21°C. The watercourse measured on average <5m wide with a river length of approximately 1km. This resulted in four MoRPh5 sub-reaches being surveyed, titled A – D, each comprising 10m x5 modules (MoRPh5) (approximate locations of the sub-reaches are provided on Figure 6). Surveys were largely undertaken from the right bank with the left bank/bank top easily visible. Sub-reach C was largely surveyed from the left bank, with the right bank top not easily visible. Where access was suitable, surveyors entered the channel. All surveys were undertaken working from upstream to downstream.

- 2.9 A second ditch is located at the Site (D1 on Figure 3 of the Ecological Appraisal, FPCR 2023), and this ditch had a low flow rate flowing from east to west and discharging into Carr Dike. Historical maps show that the ditch was not present prior to 1910, and it was created following existing field boundaries. As per the description of a ditch provided in the 3.1 Metric, the ditch on-Site is considered to be an artificially created water feature, less than 5m wide and considered likely to retain water more than four months a year, with the primary function of land drainage which would not be present without human intervention. As such, this ditch was not assessed using the RCA MoRPh methodology.

DEFRA Statutory Biodiversity Metric

- 2.10 DEFRA's published SBM is an MS Excel spreadsheet that is used to quantify the predicted net-change in biodiversity value ("biodiversity units") of a proposed development site before and after development. It treats the flat "habitats" and linear features "hedgerows" separately, and is based on pre-determined values, along with published written guidance, set by a Natural England-led team of experts. The latest version of this metric is the SBM, published in February 2024 and updated in August 2024. For the purposes of this assessment metric version 3.1 (published in April 2022) was used to make initial calculations but has been transposed into the SBM (with minor amendments) with the final calculations provided in Appendix A.
- 2.11 To facilitate this, the Site has been mapped and digitised using the Biodiversity Metric QGIS Template, with the existing habitats identified and areas automatically generated. In accordance with the SBM User Guide, habitats have been defined under UK Habitat Classification (UKHab) Version 2.0. The detailed landscaping proposals for the Site were then uploaded into the QGIS template, and the proposed habitats mapped and digitised to generate areas for each of the habitats proposed for creation.
- 2.12 These pre- and post-development habitat areas were then inputted into the SBM Calculation tool. Pre-development habitats were grouped into their habitat type and condition based on the results of the UKHab and condition assessment surveys, while post-developments were classified into their UKHab type as identified through the classification of proposed habitats within landscaping plans into appropriate UKHab types and their target condition scores. The metric then provides a habitat distinctiveness score for each of the baseline and proposed habitats which are pre-assigned scores based on the habitat type.
- 2.13 The strategic significance of the habitats was also assessed for both the pre- and post-development habitats based on the location of the site, its proximity to existing areas of biodiversity interest and its setting within wider habitat corridors.
- 2.14 The metric then assigns a range of pre-assigned factors to each of the proposed habitats. These have been advised by subject knowledge experts and are universal multipliers generated by the

metric itself for the following variables relevant to habitat creation, enhancement, or restoration proposals:

- Difficult of creating or restoring/enhancing a habitat: This pre-assigned score is based on how difficult a particular habitat type is to create or restore/enhance.
- Temporal risk: This is the ‘time to target condition’ for any particular habitat and determines how long a particular habitat type is likely to take to reach the condition score that the desired condition score assigned to it.
- Spatial risk: This score is based on the distance between the site of habitat loss and any habitats creation or enhancement proposals at any offsite offsetting solutions.

2.15 Full details of the calculation methodology used is provided in the SBM – User Guide⁸.

Limitations

2.16 The UKHab habitat map has been produced from detailed field notes and informed by aerial imagery, OS mapping and previous reports provided by the client. The accuracy of this figure is ultimately guided by the accuracy of these sources and can only be relied upon to a certain degree of resolution.

2.17 Natural ecological communities are susceptible to change; at times this change can be rapid as a result of internal and external environmental factors. The biodiversity offsetting calculations are based on ecological assessments of habitats carried out during 2022 and updated in 2023; as a result, changes which may affect the conclusions of this report may occur, if a prolonged period of time elapses prior to the commencement of the project.

2.18 The latest version of the UKHab classification⁹ is Version 2, issued in July 2023. At the time of survey UK Hab version 1 was used for the classification of habitats at the Site. The classifications have been reviewed against those in Version 2.0 and no significant changes were identified and no habitats were determined to require reclassification. As such, this is not considered to be a limitation to the classification of habitats or the calculation of biodiversity net gain.

2.19 No other limitations are considered to have influenced this assessment.

⁸ <https://www.gov.uk/government/publications/statutory-biodiversity-metric-tools-and-guides> [Accessed 09/08/2024]

⁹ UK Habitat Classification <https://ukhab.org/>

3.0 BASELINE CONDITIONS

Desktop Study

- 3.1 Full details of the desktop study are provided in the Ecological Appraisal Report (FPCR 2023).

Internationally Designated Sites of Nature Conservation Importance

- 3.2 No internationally designated sites of nature conservation were located within 15km of the Site.

Nationally Designated Statutory Sites of Nature Conservation Importance

- 3.3 One statutory designated site of national nature conservation interest was present within 2km of the Site. Dearne Valley Wetlands Site of Special Scientific Interest (SSSI) comprised a number of separate SSSI units, the nearest of which is approximately 100m south-west of the site, with a second discrete area lying 1.7km north-west, and a third discrete area lying 1.6km south-east of the development. The SSSI is designated for:

- Breeding gadwall *Mareca strepera*, shoveler *Spatula clypeata*, garganey *Spatula querquedula*, pochard *Aythya farina*, bittern *Botaurus stellaris*, black-headed gull *Chroicocephalus ridibundus* and willow tit *Poecile montanus*.
- Non-breeding gadwall and shoveler; and
- Diverse assemblage of breeding birds of lowland damp grassland, scrub, open water, and fen.

- 3.4 The Site falls into the Impact Risk Zone (IRZ) of Dearne Valley Wetlands SSSI which lists large non-residential development as a potential impact to the SSSI.

Non-Statutory Sites

- 3.5 One non-statutory site of local nature conservation interest is present within 1km of the Site. Old Moor and Wath Ings Local Wildlife Site (LWS) lies 950m south-west of the Site and is considered to be important for a range of habitats and species of flora and fauna, and particularly important for birds.
- 3.6 It should also be noted that several of the RSPB Dearne Valley sites lie south-west of the Site including Bolton Ings RSPB site (620m south-west) and Old Moor RSPB site (950m south-west).

Strategic Significance

- 3.7 The Site consists of other neutral grassland, ponds (non-priority habitat), built linear features, vacant/derelict land/bare ground, other coniferous woodland, other woodland; mixed, and arable land (cereal crops). These habitats represent no intrinsic strategic significance.
- 3.8 The entire Site lies within the Dearne Valley Green Heart Nature Improvement Area (NIA). Although funding and development of the NIA ended in 2015 the area is referenced within the Local Plan and is considered to have strategic significance. Therefore all habitats present within the Site are considered to have strategic significance.

Habitats

Ecological Appraisal (FPCR 2023)

Plantation: Other Woodland; Mixed

- 3.9 There are several compartments of plantation woodland recorded in association with Carr Dike and land adjacent to Barnsley/Doncaster Road (A635), as described in the Ecological Appraisal Report (FPCR 2023).
- 3.10 All the plantation woodland parcels are considered to be analogous to the UKHab classification of 'other woodland; mixed' (w1h) with 'plantation' (36) as a secondary code as shown in Figure 1.
- 3.11 The woodland compartments were all assessed to be in moderate condition and scored low for the following: only one or two age classes being present; lack of woodland regeneration; no recognisable NVC communities within the vegetation and ground flora; only 1-2 storeys present in vertical structure; lack of veteran trees; amount of deadwood being between 25-50% or less than 25%; and woodland disturbance evident in some cases.
- 3.12 Due to the lack of mature trees and poor overall diversity, it is considered that all of these woodlands are a poor fit with the mixed deciduous woodland category described within the Barnsley Biodiversity Action Plan¹⁰ and therefore are not considered to represent priority habitats.
- 3.13 The woodlands were assessed to be in moderate condition due to the lack of features of a mature woodland such as lack of age range, structure, ground flora, and deadwood.

Plantation: Other Coniferous Woodland

- 3.14 A single compartment of plantation coniferous woodland was located along the northern boundary of the Site. It was dominated by immature Norway spruce *Picea abies* ranging in height from 0.5 – 4m. From review of historical aerial imagery, it would appear that this area is regularly cleared (likely as a crop for Christmas trees) and the woodland is not allowed to become mature.
- 3.15 The woodland corresponds to the UKHab classification 'other coniferous woodland' (w2c) with 'plantation' (36) as the secondary code. The woodland was assessed to be in poor condition, scoring low due to the following: only one age class present; lack of native tree and shrub species; lack of woodland regeneration; no recognisable NVC communities within the vegetation and ground flora; 0-1 storeys of the woodland vertical structure; no veteran trees; less than 25% deadwood present; and some woodland disturbance.
- 3.16 Coniferous woodland is not included within the Barnsley Biodiversity Action Plan.

Urban Trees

- 3.17 Several mature pedunculate oak *Quercus robur* trees were observed to be associated with hedgerow H1 (see Figure 3 of the Ecological Appraisal) and classified as 'native hedgerow with trees' (hedgerow h2 with code 190) under UKHab secondary codes (see Figure 1). Although the extent of deadwood and other features did not indicate possible veteran status, two of the trees supported features such as stem cavities which are described in the faunal section in the Ecological Appraisal with regard to bat roost potential.

¹⁰ Barnsley Biodiversity Trust (2022) *Barnsley Biodiversity Action Plan Consultation Draft 2022 – for comment*. Available online at: http://www.barnsleybiodiversity.org.uk/deciduouswoodland_features.html [accessed 13.06.22].

- 3.18 Mature trees associated with the Carr Dike corridor included crack willow *Salix fragilis*, pedunculate oak, and beech *Fagus sylvatica* were assessed under the UKHab secondary code as 'scattered trees' (11).
- 3.19 A number of sycamore *Acer pseudoplatanus* trees were recorded at the southern Site boundary adjacent to Carr Head Lane and eight of these were considered to be established as individual medium trees. Trees appeared free of obvious disease and no features indicating possible veteran status were noted. No protected/undisturbed strip of land was recorded at the base in association with these trees. The trees are considered to correspond to UKHab secondary code 'scattered trees' (11).
- 3.20 In total 36 trees were identified and presented as individual trees in the baseline.

Scrub

- 3.21 Scrub habitats comprising discreet patches of continuous and scattered scrub were observed in association with tall herbs within some of the grassland field margins. These areas were either dominated by bramble or hawthorn (with over 75% cover) and homogenous stands of common nettle and cleavers were recorded at their margins. Varied age classes were absent from these areas of scrub.
- 3.22 The scrub on-Site is classified as 'scattered scrub' (10) under UKHab secondary codes and is associated with the relevant primary habitats it is linked to (see Figure 3 of the Ecological Appraisal Report). Given the extent of the Site/habitats these small areas of scattered scrub were not mapped or classified within the BNG calculation but were included as part of the wider primary habitat present.

Other Neutral Grassland

- 3.23 A number of semi-improved grassland parcels were located within the Site and were noted to be associated with field margins and boundaries: described under arable margin 1 and 2 (AM1 and AM2) in the Ecological Appraisal Report.
- 3.24 Both AM1 and AM2 were assessed as being analogous with UKHab classification 'other neutral grassland' (g3c) as shown in Figure 1. The habitats were assessed as being in moderate condition: failing criteria for lack of species diversity and sward height variation.

Modified Grassland

- 3.25 A parcel of poor semi-improved grassland (labelled as PS1 in the Ecological Appraisal Report) is located in the north of the Site, corresponding to the UKHab definition for 'modified grassland' (g4) as shown in Figure 1. It was assessed as being in poor condition due to its low species diversity and bare ground coverage not being between 1-10%.

Open Water

Pond (Non-priority)

- 3.26 A non-priority pond was located in the north of the Site within the area of coniferous plantation and was observed to be approximately 4m wide by 8m long with relatively steep but small banks and tall grasses and herbs on the banksides.

- 3.27 The pond is analogous with the UKHab classification 'other eutrophic standing waters' (r1a6). It was assessed as being in poor condition failing for the following: the pond was not of good water quality indicated by the presence of algae and turbidity; within 10m from the pond edge there is not semi-natural habitat due to its location within the coniferous plantation; more than 10% of the pond is covered with duckweed or filamentous algae; the pond is artificially connected to ditches at either end.

Running Water

- 3.28 A stream (Carr Dike) bisected the Site, flowing in a general south-westerly direction, entering the Site from a culvert under Barnsley/Doncaster Road in the north-east of the Site and exiting the Site in the central, western area. The channel was approximately 2m wide throughout the length on-Site with a moderate flow of water and very steep banks in most areas (set at around 80 degrees). The stream meets UKHab definition 'other rivers and streams' (r2b) and was further assessed using the River Condition Assessment (RCA) MoRPh methodology, as outlined in the RCA section below
- 3.29 A single wet ditch, acting as a tributary of Carr Dike (referenced as D1 in the Ecological Appraisal Report) was located in the central area of the Site entering the Site from the eastern boundary (from the Aldi Regional Distribution Centre) and flowing in a general west/south-west direction discharging into Carr Dike at a point in the central west area of the Site. The channel was observed to be approximately 2m wide, with slow flowing water and supported no aquatic or emergent vegetation and was shaded by an adjacent dense hedgerow (H5 in the Ecological Appraisal). The habitat was assessed within the river condition assessment as a wet ditch (analogous of 'standing open water and canals' r1 within the UKHab classification)).

Arable

- 3.30 A series of large cultivated arable fields supported cereal crops and oilseed rape *Brassica napus* with margins of 1m wide or less which were dominated by a small number of common grasses. The arable compartments are categorised as 'cereal crops' (c1c) under UKHab classification, the condition of which is not applicable.

Hedgerow

- 3.31 Thirteen native hedgerows were identified during survey of the Site and assessed under the Hedgerow Regulations 1997. Twelve hedgerows did not qualify as 'important' due to low canopy diversity and lack of associated features. One hedgerow (H11; see Ecological Appraisal Figure 3) did not meet the criteria for 'important' as it was less than 30 years old, however it was noted to have the prerequisite number of woody species (native species rich). Upon mapping the location of Hedgerow 11 it was noted that it was located outside the red line boundary of the Site (to the east) and as such is omitted from the BNG calculation.
- 3.32 The hedgerows were further assessed under the Hedgerow Evaluation and Grading System (HEGS) to assess their conservation value. Of the 13 hedgerows assessed most supported a dense structure with some connectivity (detailed within Table 2 in the FPCR Ecological Appraisal 2023). Five hedgerows were graded as moderately high, to high conservation value, and eight hedgerows were graded of moderate conservation value.

- 3.33 All hedgerows were assessed as being in good condition and are classified as ‘native hedgerow’ (h25) under UKHab with additional codes for species-rich hedgerow, inclusion of trees, or association with bank/ditches (where present).

Dry Ditch

- 3.34 Typically, dry ditches encountered within the Site were approximately 0.5m wide and 0.5m deep with steeply sloping sides vegetated by encroaching grasses and herbs, although lacking in any aquatic vegetation. The individual dry ditches are described in the Ecological Appraisal Report.
- 3.35 The dry ditches would be categorised as UKHab secondary code ‘ditch’ (191) and are associated with the relevant primary habitats the ditches are located within. Dry ditches are not included in the mapping (Figures 1-5) and only the primary habitats are shown (due to the relative size of the Site/habitats). Condition assessments are not applicable to dry ditches.

Bare Ground

- 3.36 Recently cleared ground was observed between the two compartments of ‘other mixed woodland’ on the northern boundary of the Site (shown as ‘vacant / derelict land / bare ground’ habitat on Figure 1 and described further within the Ecological Appraisal Report). This area comprised poached, and wheel rutted fresh earth, wood/shrub brush, young tree stumps, litter, and occasional areas of regenerating herbs at ground level. This area appears to have been felled at some point during 2021/early 2022 and was not cleared as part of the current development application but in relation to a separate development for a new roundabout on the A635 Barnsley/Doncaster Road (Planning application reference 2021/1511). The condition assessment is not applicable for this habitat. It is assumed that the loss of habitats in this area due to the construction of the roundabout would be accounted for by the separate planning application and as such the area is assessed as ‘vacant / derelict land / bare ground’ within this assessment.

River Condition Assessment

- 3.37 Carr Dike was assessed using the RCA MoRPh5 methodology. Four sub-reaches were identified A-D, each comprising 5 x 10m modules. The watercourse falls within the Humber River Basin District and within the Dearne Catch Operational Catchment Ings/Carr/Thurnscoe Dikes from Source to Dearne Water Body¹¹. The river type was assessed to be River Type A (Confined bedrock) with a sinuosity of 1.03 and not considered to be over deep.
- 3.38 Table 1 below provides the condition class scores for the sub-reaches surveyed.

Table 1. RCA Final Condition/Class Scores

Sub-reach	Preliminary Condition Score	Final Condition Class / Score
A	0.955	Moderate / 3
B	1.036	Moderate / 3
C	1.117	Moderate / 3
D	0.676	Moderate / 3

Baseline

¹¹ <https://environment.data.gov.uk/catchment-planning/> [Accessed 15.08.2023]

- 3.39 The watercourse was surrounded by large fields of arable land, although some sections of the watercourse flowed through small stands of plantation woodland.
- 3.40 The watercourse (as a whole) tended to score poorly for bank-top vegetation structure, tree feature richness, water-related features, managed ground cover, and also scored poorly for bank profile attributes including vegetation structure, tree feature richness, and natural bank material richness.
- 3.41 The channel margins scored poorly in respect of physical features extent, with sub-reaches A and B also scoring poorly in terms of aquatic vegetation and morphotype richness.
- 3.42 All the sub-reaches scored poorly when it came to the bed channel tree feature richness, hydraulic feature richness and natural features richness, with sub-reaches A and C also scoring poorly for natural feature extent.
- 3.43 Although Himalayan balsam *Impatiens glandulifera* was recorded occasionally on some of the banks, the sub-reaches still score relatively well in respect of invasive species.

Post Development

- 3.44 The watercourse will be retained within the Proposed Development and will largely be buffered from the development footprint with the creation of semi-natural habitats.
- 3.45 The change of bank-top use from agriculture to native habitat creation will improve the tree feature richness and managed ground cover scores along the watercourse, whilst removal of Himalayan balsam and the small area of concrete on the banks of sub-reach D will marginally improve the relevant scores for sub-reaches A, C and D. It is considered that these enhancements would improve the condition to **fairly good**.
- 3.46 A single section of watercourse, approximately 42m in length will be culverted to provide a road crossing.
- 3.47 The ditch which discharges into Carr Dike will also have a section of approximately 40m in length culverted to provide a road crossing.
- 3.48 A small amount of additional wet ditch will be created within the Proposed Development.

RCA Summary

- 3.49 For the purposes of the SBM calculation the RCA has determined the following characterisation for Carr Dike:
- River type is “other river”, in moderate condition. Carr Dike would be considered to be within the catchment management plan. No watercourse encroachment was assessed to be present. Riparian encroachment includes encroachment of intensive arable agriculture along much of the banks, though in places the presence of woodland and field margin habitats reduce encroachment.
- 3.50 The tributary of Carr Dike in the east of the Site is known to be a created drainage feature and as such, under the SBM calculation has been classified as a “ditch” in moderate condition. No watercourse encroachment was assessed to be present although similar to Carr Dike some riparian encroachment from intensive arable agriculture was present along much of the banks.

4.0 PROPOSED DESIGN

- 4.1 Habitat proposals have been informed by the Illustrative Masterplan, Drawing No. 22081 F0045. UMC Architects, 2023 (*Environmental Statement Figure 4.1*). Additional detail has been provided from landscape plans provided by Barry Chinn Associates (2024). Proposals aim to create habitats appropriate to the local area, with conditions targeted to be realistically achievable.

Retained Habitats

- 4.2 Habitat retention is illustrated in Figure 3.
- 4.3 It is assumed that the development plots will be cleared and remain cleared prior to development at a later date. The development plots will be subject to further assessment of BNG at reserved matters.
- 4.4 It is assumed that all compartments of arable fields within the Site will be cleared prior to development in order to level the development area and allow of the installation of drainage and other services.
- 4.5 Habitat parcels to be retained include the broadleaved woodland parcels: PBW1, PBW2, PBW4, PBW5 and PBW6 (refer to Figure 3 of the FPCR Ecological Appraisal 2023), without enhancement.
- 4.6 Hedgerow retention includes the native hedgerows in the northeast border of the site (H6, H7) and the southern border (H2, H3, H4) (refer to Figure 3 of the FPCR Ecological Appraisal 2023), without enhancement.
- 4.7 36 individual trees were present in the baseline, and 9 trees will be lost to the development. Overall the majority of urban trees within the Site will be retained.

Habitat Enhancement

- 4.8 Habitat Enhancement is illustrated in Figure 3.
- 4.9 All of the area habitats and hedgerows within the Site (with the exception of those retained) are assumed will be lost to Site clearance and earthworks.
- 4.10 The stream (Carr Dike) which bisects the Site, as described above, will be enhanced through the provision of additional bankside habitat management and habitat creation improving the bankside grassland habitats, as well as the proposed bank top grassland and woodland habitat creation providing improvements to the channel corridor. Bankside grasslands will be enhanced through overseeding, appropriate cutting and removal of arisings, and treatment/removal of undesirable species and invasive species, as well as planting of desirable species (where appropriate). The change of use from agricultural arable bank-top habitats to native habitat creation will facilitate some uplift in the condition of the watercourse.

Habitat Creation

- 4.11 Post-development habitats are shown in Figure 4. Habitat creation proposals include the creation of a range habitats suited to an urban edge location, including other neutral grassland, mixed scrub, sustainable urban drainage basin, modified grassland, broadleaved and mixed woodland, wet woodland, ponds, ornamental planting, hedgerows and individual urban trees.

- 4.12 The existing corridor of the Carr Dike watercourse will be retained and extended with woodland planting and areas of grassland providing rides and glades. Woodland creation will include areas planted and managed to be wet woodland.
- 4.13 On the Site boundaries, where practicable, habitats will be retained, and in these areas existing areas of woodland will be expanded or extended through additional woodland and scrub planting, strengthening connectivity along the Site boundary (particularly on the southern boundary).
- 4.14 Embankments to in the north and west of the Site will also be planted (in part) as woodland and managed to provide biodiversity, ecological connectivity, and visual screening of the development plots.
- 4.15 Extensive grassland areas will be provided in the north and west of the Site to provide areas of flood alleviation, additional biodiversity, and connectivity, including connectivity and habitat for marsh harriers known to be present in this area.
- 4.16 Six permanent pond features will be created within the full application Site. These will be used for Site drainage but will also be managed as ponds to provide biodiversity value. These ponds will provide new habitats within the Site which may support species also associated with the nearby Dearne Valley Wetlands SSSI and the local RSPB reserves.
- 4.17 SUDS features will be created within the Site and will include new ditches and semi-permanent pond/basin features.
- 4.18 Hedgerows will be created across the Site to provide additional boundary habitats in the west of the Site, as well as providing connective and aesthetic functions on the boundaries of the development plots and following access roads within the Site.
- 4.19 Small lengths of new ditch will be created to provide drainage function within the Site.

Biodiversity Units

- 4.20 The biodiversity units for each habitat on the Site have been calculated and are presented in Table 2, along with a description of the management recommendations which will be employed to achieve the target conditions for each habitat type.

Table 2: Summary of Proposed Habitat Management

Habitat (Proposed Site Plan)	Habitat (UKHab Type)	Targets for Creation/Management	Area/Length	Target Condition	Distinctiveness	Biodiversity Units
Terrestrial/Area based Habitat Units						
Proposed individual trees	Urban tree	<p>241 trees will be planted throughout the grassland and ornamental planting areas of the Site and adjacent to hedgerows. Species will be native and managed to achieve moderate condition. Many trees will be planted as heavy standards however, as their growth cannot be predicted as a precautionary measure their size is assumed to only reach “small”.</p> <p>Trees will be managed to achieve moderate condition.</p> <ul style="list-style-type: none"> • Area beneath trees maintained as vegetation (not paved/graveled) • Avoid herbicide use in close proximity to trees (<1m). • Replace any failed specimens. 	0.9812ha	Moderate	Medium	3.45
Retained individual trees	Urban Tree (retained)	27 medium sized trees will be retained within the Proposed Development and managed to maintain moderate condition.	0.5863ha	Moderate	Medium	4.05
Proposed Grassland	Modified grassland	Small areas of modified grassland will be maintained on the verges along the Site access roads. Although these will be more intensively managed areas of grassland a diverse seed mix suitable for roadside amenity use will be used and the number of species per metre will be maximised. Management will aim to maintain these habitats in moderate condition.	0.2285ha	Moderate	Low	0.91
Proposed Meadow Grassland	Other-neutral grassland	Grassland areas throughout the Site will be managed to produce a species diverse other neutral grassland. The areas of flood alleviation in the north and west of the Site will be managed with species that form tussocks and are tolerant to wet/damp conditions. Whilst no specific habitat UKHab/NVC habitat community will be targeted the seed mixes used will	17.1851ha	Moderate	Medium	132.31

Habitat (Proposed Site Plan)	Habitat (UKHab Type)	Targets for Creation/Management	Area/Length	Target Condition	Distinctiveness	Biodiversity Units
		<p>look to create a high species count (to encourage up to 12 species per m²) and should areas fail these will be resown.</p> <p>The area will undergo annual management to remove any encroaching scrub, tall ruderal species, undesirable species, and invasive species (if present).</p> <p>An annual cut will take place in late summer and all arisings removed from the grassland areas. When appropriate an earlier cut may also be used to create diversity in the structure of the grasslands. Small areas of bare ground 1-5% would be beneficial and might be created within the grassland areas.</p>				
Proposed pond and marginal planting	Ponds (non-priority habitat)	Permanently wet ponds will be provided as part of the Site's Sustainable Urban Drainage Systems (SUDS) and as such will be managed as non-priority pond habitats in poor condition. Never-the-less, ponds will be provided with diverse marginal planting too promote biodiversity.	2.412ha	Poor	Medium	10.71
Proposed Native Thicket/Woodland Edge	Mixed scrub	<p>Mixed scrub planting will be provided in a number of areas throughout the Site to provide ecological diversity, woodland edge structure, and screening of the development or other features within the Site. Species are not yet specified but will comprise a mix of native species and where possible include species that are of value to wildlife (providing food sources from flowers and nuts/berries).</p> <p>The following management prescriptions should be adopted to achieve moderate condition:</p> <ul style="list-style-type: none"> • Planting mix to use a diverse range of native species, with no one species compromising more than 50% of the mix. • Replace any failed woody specimens. • Targeted weeding/treatment to limit/remove invasive/undesirable species to below 5% ground cover (typical species include but are not limited to- Creeping 	2.739ha	Moderate	Medium	21.09

Habitat (Proposed Site Plan)	Habitat (UKHab Type)	Targets for Creation/Management	Area/Length	Target Condition	Distinctiveness	Biodiversity Units
		<p>thistle <i>Cirsium arvense</i>, Cleavers <i>Gallium aparine</i>, and common nettle <i>Urtica dioica</i>).</p> <ul style="list-style-type: none"> • Allow a graduated edge to form with scattered scrub and tall grassland along the periphery. • Rotational clearance/coppicing of selected areas to allow opportunities for natural regeneration. 				
Proposed Amenity Shrubs and Grasses	Introduced Shrub	A small area of roadside planting will be provided as low growing ornamental shrub to allow for visibility on the bend in the access road. This area will be managed to ensure the shrub remains healthy and viable.	0.0594ha	N/A	Low	0.13
Sustainable Urban Drainage Basins	Sustainable Urban Drainage Features	<p>SUDS features will include a cascading pond system in the eastern area of the Site which is anticipated will be wet for part of the year but may occasionally dry. The area will be managed to extend the adjacent grassland but will likely colonise with species tolerant of wet/damp conditions.</p> <p>The area will be planted/seeded with a range flowering native species tolerant to wet/damp conditions and the structure of the habitat managed or allowed to develop to be varied.</p>	0.2694ha	Moderate	Low	0.75
Proposed Native Woodland	Other Woodland - Broadleaved	<p>Areas of woodland planting will be provided throughout the Site extending retained areas of woodland as well as providing new woodland blocks.</p> <p>Woodland will be managed towards moderate condition with native species planted to provide diversity and any failed trees being replaced at regular intervals. Management will allow for variation in the woodland to allow small glades and rides to develop and aim for the development of an understorey layer and active regeneration in the longer term. The woodland will be regularly managed to prevent the establishment of undesirable and non-native invasive species.</p>	4.6621ha	Moderate	Medium	25.14

Habitat (Proposed Site Plan)	Habitat (UKHab Type)	Targets for Creation/Management	Area/Length	Target Condition	Distinctiveness	Biodiversity Units
Proposed Native Woodland	Other Woodland - Mixed	<p>Areas of woodland planting will be provided throughout the Site extending retained areas of woodland as well as providing new woodland blocks.</p> <p>Woodland will be managed towards moderate condition with native species planted to provide diversity and any failed trees being replaced at regular intervals. Management will allow for variation in the woodland to allow small glades and rides to develop and aim for the development of an understorey layer and active regeneration in the longer term. The woodland will be regularly managed to prevent the establishment of undesirable and non-native invasive species.</p>	6.0189ha	Moderate	Medium	19.02
Proposed Native Woodland	Wet Woodland	<p>Areas of woodland planting following the corridor of Carr Dike will be managed towards wet woodland with species characteristic of wetter conditions.</p> <p>Woodland will be managed towards moderate condition with native species planted to provide diversity and any failed trees being replaced at regular intervals. Management will allow for variation in the woodland to allow small glades and rides to develop and aim for the development of an understorey layer and active regeneration in the longer term. The woodland will be regularly managed to prevent the establishment of undesirable and non-native invasive species.</p>	3.1411ha	Moderate	High	17.02
Existing Vegetation Retained	Other Woodland – Mixed (Retained)	<p>Areas of existing mixed woodland will be retained on the Site boundaries and along the corridor of Carr Dike</p>	2.2715ha	Moderate	Medium	20.90
Development plots	Commercial	<p>Development plots have been assumed to be cleared and provided with a generic habitat of “commercial”, to effectively show that for the purposes of this assessment these areas will provide no habitat units. These areas will be assessed further at the reserved matters stage, any habitats created in these</p>	44.2032ha	N/A	N/A	0.00

Habitat (Proposed Site Plan)	Habitat (UKHab Type)	Targets for Creation/Management	Area/Length	Target Condition	Distinctiveness	Biodiversity Units
		areas in advance of reserved matters will be included in the future assessment.				
Pedestrian footpaths	Artificial unvegetated, unsealed surface	Footpaths within the open space areas of the Site.	0.1636ha	N/A	N/A	0.00
Roads, pavements, infrastructure	Developed Land/Sealed surface	Roads, pavements, and sealed surfaces throughout the Site.	2.0679ha	N/A	N/A	0.00
Hedgerow Biodiversity Units						
Proposed Native Hedgerow	Native Hedgerow	<p>New native hedgerow planting will be provided across the Site, species are not yet known therefore species rich has not been specified, but where possible planting will look to achieve >5 woody native species per 30m.</p> <p>Target condition is good, which is considered to be achievable across the Site. Hedgerows will be managed to be at least 1.5m wide and where possible 1.5m high, without gaps to canopy or any gaps within the hedgerow.</p> <p>The following management prescriptions should be adopted to increase the value of the hedgerow:</p> <ul style="list-style-type: none"> • Planting will ensure a diversity of native species with at least five different native woody species every 30m for species rich hedgerows. • The borders of the hedgerow (where appropriate) will be subject to relaxed management to encourage a diverse interface between habitats. • Treatment to remove any invasive non-native species and undesirable species (e.g. common nettle). 	2.092km	Good	Low	9.42

Habitat (Proposed Site Plan)	Habitat (UKHab Type)	Targets for Creation/Management	Area/Length	Target Condition	Distinctiveness	Biodiversity Units
		<ul style="list-style-type: none"> Replacement planting to compensate for failed specimens during establishment period. Canopy height allowed to reach and be maintained above 1.5m. 				
Native hedge	Native hedgerows with trees	<p>New native hedgerow planting will be provided across the Site, species are not yet known therefore species rich has not been specified, but where possible planting will look to achieve >5 woody native species per 30m. In addition standard tree planting will also be provided at 20m intervals or less.</p> <p>Target condition is good, which is considered to be achievable across the Site. Hedgerows will be managed to be at least 1.5m wide and where possible 1.5m high, without gaps to canopy or any gaps within the hedgerow.</p> <p>The following management prescriptions should be adopted to increase the value of the hedgerow:</p> <ul style="list-style-type: none"> Planting will ensure a diversity of native species with at least five different native woody species every 30m for species rich hedgerows. The borders of the hedgerow (where appropriate) will be subject to relaxed management to encourage a diverse interface between habitats. Treatment to remove any invasive non-native species and undesirable species (e.g. common nettle). Replacement planting to compensate for failed specimens during establishment period. Canopy height allowed to reach and be maintained above 1.5m. 	1.763km	Good	Medium	11.93

Habitat (Proposed Site Plan)	Habitat (UKHab Type)	Targets for Creation/Management	Area/Length	Target Condition	Distinctiveness	Biodiversity Units
Native hedge	Native hedgerows (Retained)	Areas of native hedgerow bounding the Site will be retained where possible and managed to maintain their existing habitat condition.	1.081km	Good	Low	9.82
Native hedge	Native hedgerow with ditch (Retained)	Areas of native hedgerow bounding the Site will be retained where possible and managed to maintain their existing habitat condition.	0.381km	Good	Medium	5.26
River Biodiversity Units						
Watercourse	Ditches (Created)	Small sections of wet ditch will be provided as part of the SUDS features within the proposed development. The ditches will be managed with a diverse range of planting of marginal and emergent vegetation which will be replaced if failed and maintained in good health. Any undesirable and non-native invasive species will be removed through regular maintenance and woody species deterred from overshadowing the ditch through removal or pruning.	0.045km	Moderate	Medium	0.23
Watercourse/Culvert under roadway	Culvert	Carr Dike and the existing drainage ditch on-site will both have sections culverted to allow for an access road to cross the watercourses. The culvert is expected to be of concrete construction with limited variation in channel morphology or ecological features.	0.082km	Poor	Low	0.08
Existing Watercourse	Other Rivers and Streams (Enhanced)	Sections of Carr Dike will be enhanced through land-use change on the bank tops, as well as management of the banks to provide additional diversity to bank side vegetation and emergent vegetation within the channel. There will be a reduction in encroachment from intensive arable agriculture.	1.06km	Enhance from Moderate to Fairly Good	High	16.66

Habitat (Proposed Site Plan)	Habitat (UKHab Type)	Targets for Creation/Management	Area/Length	Target Condition	Distinctiveness	Biodiversity Units
Existing Watercourse	Ditches (Enhanced)	<p>The drainage ditch in the central area of the Site which discharges into Carr Dike will be retained. The ditch and banks will be managed to maintain the current moderate condition, but where there is opportunity, management should encourage enhancement/improvement of the banks and emergent vegetation along this ditch.</p> <p>There will be a reduction in encroachment from intensive arable agriculture which will enhance this drainage ditch.</p>	0.433km	Moderate	Medium	4.44

Additional Enhancements

- 4.21 In line with the recommendations from the Ecological Appraisal (FPCR 2023), Bat Report (FPCR 2023), Breeding Bird Report (FPCR 2023) and Wintering Bird Report (FPCR 2023), additional mitigation measures will be implemented to contribute to a biodiversity net gain across the Site. This will focus on the provision of faunal enhancements that are not captured within the SBM calculations.
- 4.22 It is anticipated that a scheme of bat box installations on poles, buildings, or where available retained vegetation, will be provided with 15no. bat boxes considered appropriate for the size of the Site and local bat populations.
- 4.23 The development will include a lighting scheme which will aim to minimise impacts upon retained habitats, and in particular habitats used by bats.
- 4.24 It is anticipated that a scheme of bird box installations will take place in areas of retained vegetation and may also be incorporated into/onto the proposed buildings. The bird boxes would incorporate a mixture of boxes suitable for a range of urban edge species. Numbers of bird boxes have not been quantified but would be appropriate to the size of the Site and bird assemblages that might use the boxes. Care will be taken when locating the boxes to avoid conflict with species targeted for enhancement or mitigation.
- 4.25 The provision of features which may attract willow tits *Poecile montanus* will be provided in the area to be developed as wet woodland. Willow tits require specialist nesting habitat in the form of holes within decaying deadwood. Where appropriate decaying logs of birch or willow will be attached to existing retained vegetation on the Carr Dike corridor.
- 4.26 The following provisions will be included where appropriate:
- Log piles - logs will be retained from clearance works and used to create features for fauna and insects within areas of habitat creation.
 - Debris piles – debris such as rocks, and soil from clearance works may be used to create features with structural diversity for fauna and insects within areas of habitat creation.

5.0 BIODIVERSITY NET GAIN (BNG) METRIC

5.1 The habitat retention, enhancement, and creation proposals detailed within this report have all been inputted into the Biodiversity Metric 3.1. Table 3 provides a summary of the headline results of the Biodiversity Metric 3.1 assessment completed for the proposals. The full metric has been provided in Appendix A.

Table 3: Biodiversity Metric 3.1 Headline Results

Baseline	Habitat Units	229.40
	Hedgerow Units	26.77
	Watercourse Units	16.82
Post-Intervention	Habitat Units	255.45
	Hedgerow Units	36.43
	Watercourse Units	21.41
Total Net Unit Change	Habitat Units	+26.05
	Hedgerow Units	+9.66
	River Units	+4.58
Total Net Percentage Change	Habitat Units	+11.36%
	Hedgerow Units	+36.07%
	River Units	+27.25%

Please note there may be minor discrepancies (rounding errors) between the columns and the totals, however, the numbers duplicate those presented within the matrix calculator (provided as Appendix A).

5.2 As shown in Table 3, assessment has demonstrated proposals will lead to a gain in area-based units in all three categories: habitat, hedgerow, and river.

5.3 As set out above, this application achieves the policy requirement of 10% net gain within the Site Boundary, with the potential to utilise the additional units for other developments in the future.

Habitat Trading Rules

Trading Summary

5.4 The proposals satisfy the trading rules as set out within the SBM. Table 4 summarises the habitat trading summaries across the Site.

Table 4: Habitat Trading Summary

Trading Summary		
Distinctiveness Group	Trading Rule	Trading Satisfied?
Very High	Bespoke compensation likely to be required	Yes
High	Same habitat required	Yes
Medium	Same broad habitat or a higher distinctiveness habitat required	Yes
Low	Same distinctiveness or better habitat required	Yes

6.0 BIODIVERSITY NET GAIN PRINCIPLES

6.1 The above have been guided by the Biodiversity Net Gain Principles. Table 5 lists all of the principles along with a description of how the principles has been applied to this assessment.

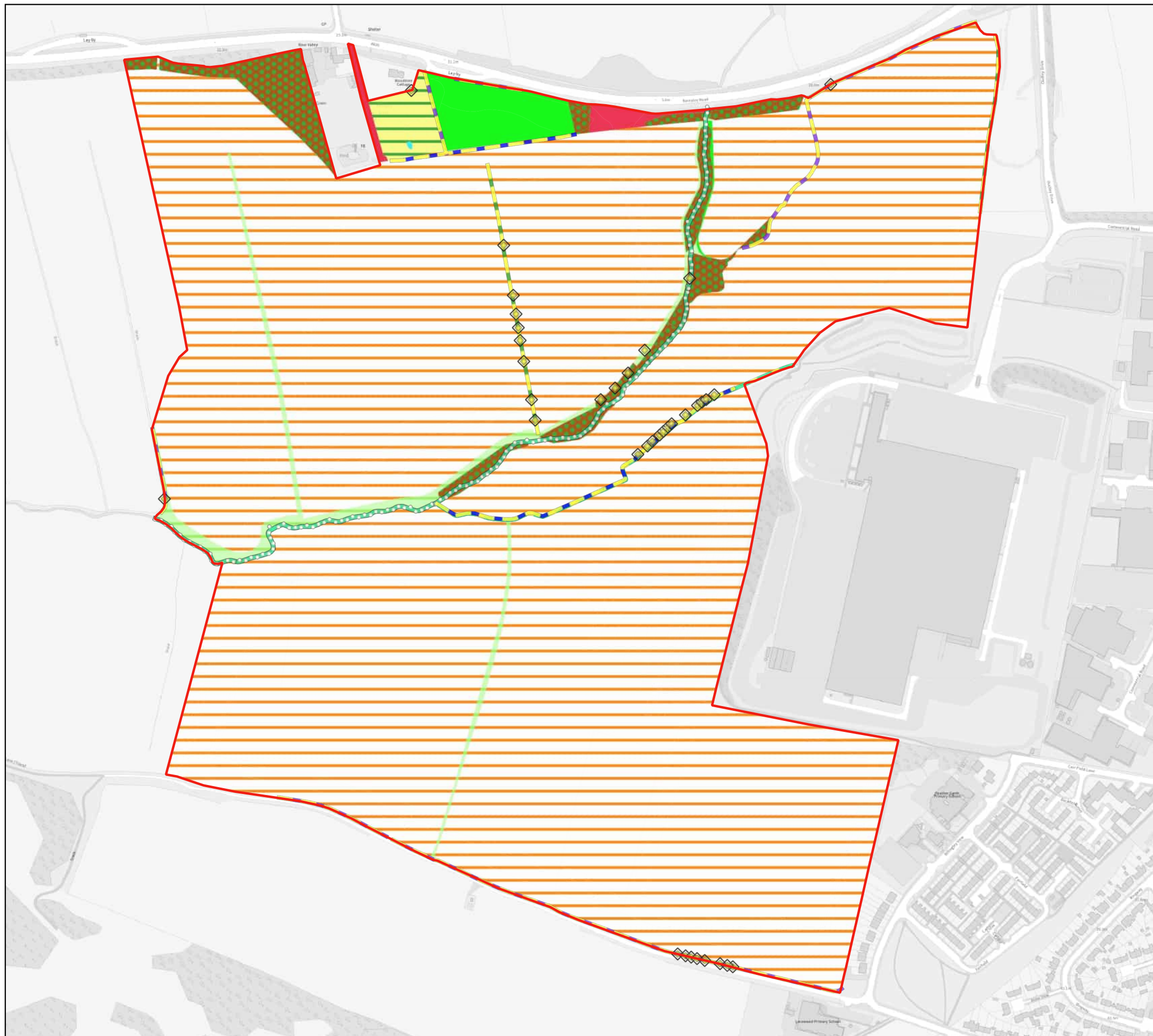
Table 5: Application of the Biodiversity Net Gain Principles to the Proposals

Principle	Indicators
Principle 1: Apply the Mitigation Hierarchy	<p>The Site is allocated for employment development within the Barnsley Local Plan. The Site location is within an area of previous agricultural land-use with the majority of habitats present being of low ecological value. The Proposed Development provides a significant Biodiversity Net Gain on-site for terrestrial habitats, hedgerows, and rivers.</p> <p>The evolution of the design of the Site has sought to reduce impacts to biodiversity and increased the area of compensatory habitats within the red line from that of the originally allocated masterplan site (ES10). Where habitats and ecological features are impacted or lost due to the proposals compensation and mitigation have been provided within the proposed design.</p>
Principle 2: Avoid losing biodiversity that cannot be offset by gains elsewhere	<p>Habitats present at the Site, and which were to be lost or impacted by the development, were not considered to be highly distinctive or unable to be offset by gains elsewhere.</p> <p>The proposals have sought to retain hedgerows where possible as well as retaining the existing woodland on the Site boundary and along the Carr Dike corridor.</p>
Principle 3: Be inclusive and equitable	<p>Preliminary biodiversity net gain calculations were provided during the design stage to inform the proposals. These were completed originally using the 3.1 metric and later updated into the SBM,</p> <p>The Site design evolved with input from the preliminary calculations in order to maximise the potential for Biodiversity Net Gain and meet the metric trading rules.</p>
Principle 4: Address risks	<p>The habitats recommended for creation include those that would be suitable for establishment in the urban edge setting and provide some similar habitats to those within nearby designated sites and nature reserves.</p> <p>The condition scores have been set at achievable levels, though management will ultimately strive to improve the condition scores above those stated above where possible.</p>
Principle 5: Make a measurable Net Gain contribution	<p>This assessment has demonstrated that a net gain will be achieved on-site, when compared to the pre-development baseline.</p>
Principle 6: Achieve the best outcomes for biodiversity	<p>The habitats created will improve connectivity with grassland and woodland habitats providing a north/south corridor in the western are of the Site, and woodland planting and retained woodland providing a corridor following Carr Dike in a north-east/south-west orientation.</p>
Principle 7: Be additional	<p>Additional biodiversity enhancements will be incorporated in the scheme to provide further benefits for faunal species e.g. bat and bird boxes and habitat piles.</p>

Principle	Indicators
Principle 8: Create a Net Gain legacy	<p>This document will inform future management provision for the Site. Management should be secured in the long-term to ensure that the target conditions can be achieved.</p> <p>It is recommended that a specific detailed Landscape Environmental Management Plan (LEMP) is also produced to document detailed management of the proposed habitat creation areas.</p>
Principle 9: Optimise sustainability	The habitat creation scheme will improve connectivity and improve opportunities for a range of faunal species.
Principle 10: Be transparent	All assumptions have been set out within this report and its appendices to ensure that the information used to inform the SBM calculations can be reviewed.

7.0 CONCLUSION

- 7.1 The approach to habitat creation has aimed to maximise biodiversity value within the space made available within the proposals for habitat creation. Biodiversity Net Gain has then been used to inform the habitat creation and enhancement proposals for the scheme and to guide decisions around additional habitat provision.
- 7.2 The results of the assessment demonstrate that the outline scheme currently will lead to a surplus of area-habitat biodiversity units, a surplus of hedgerow biodiversity units, and a surplus of watercourse biodiversity units within the Site and will meet the SBM trading rules.
- 7.3 This calculation demonstrates that 10% net gain will be achievable on-site, as per the requirements of the ES10 masterplan and policies within the Barnsley Local Plan.
- 7.4 As set out above, this application achieves the policy requirement of 10% net gain within the Site Boundary, with the potential to utilise the additional units for other developments in the future).



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Key

Red Line Boundary

Red Line Boundary

Habitats Baseline

- Built linear features
- Cereal crops
- Modified grassland
- Other coniferous woodland
- Other neutral grassland
- Other woodland; mixed
- Ponds (non-priority habitat)
- Vacant or derelict land

Hedgerow Baseline

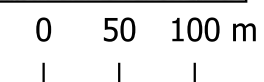
- Native hedgerow
- Native hedgerow - associated with bank or ditch
- Native hedgerow with trees

Baseline Trees

- Existing Medium Urban Tree

Watercourse Baseline

- Ditches
- Other rivers and streams



client
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
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drawing / figure number
Figure 1

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Key

 **Red Line Boundary**




Proposed Trees

-  **Proposed Small Urban Tree**
-  **Retained Medium Urban Tree**
-  **Lost Urban Tree**

Habitats Proposed

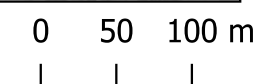
-  **Artificial unvegetated, unsealed surface**
-  **Developed land; sealed surface**
-  **Introduced shrub**
-  **Mixed scrub**
-  **Modified grassland**
-  **Other neutral grassland**
-  **Other woodland; broadleaved**
-  **Other woodland; mixed**
-  **Ponds (non-priority habitat)**
-  **Sustainable drainage system**
-  **Wet woodland**
-  **Commercial**

Hedgerow Proposed

-  **Native hedgerow**
-  **Native hedgerow - associated with bank or ditch**
-  **Native hedgerow with trees**

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PROPOSED HABITATS

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Key

Red Line Boundary

 Red Line Boundary

Habitat Retention

 Retained

 Lost

Hedgerow Retention

 Retained

 Lost

Watercourse Retention

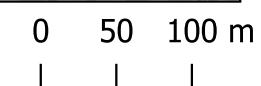
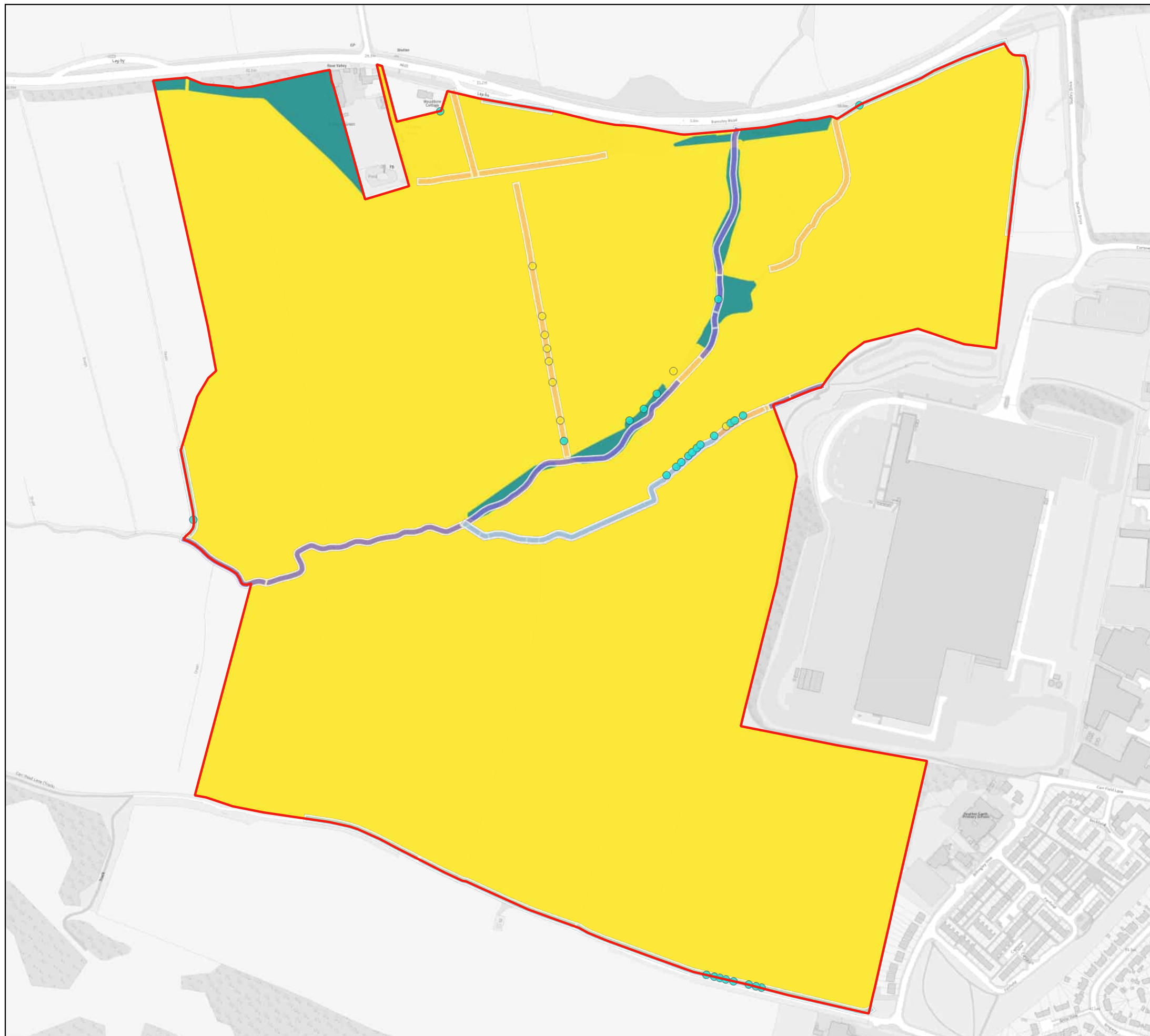
 Enhanced

 Lost

Individual tree Retention

 Retained

 Proposed Lost



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HABITAT RETENTION



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Key

Red Line Boundary

Red Line Boundary

Baseline Individual Tree Condition

Moderate

Baseline Habitat Condition

Moderate

Poor

N/A - Other

Condition Assessment N/A

Baseline Habitat Distinctiveness

Medium

Low

V.Low

Baseline Hedgerow Condition

Good

Baseline Hedgerow Distinctiveness

Medium

Low

Watercourse Baseline Condition

Moderate

Watercourse Baseline Distinctiveness

High

Medium

N/A

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Key

Red Line Boundary

 Red Line Boundary

Proposed Habitat Condition

 Moderate

 Poor

 N/A - Other

 Condition Assessment N/A

Proposed Habitat Distinctiveness

 High

 Medium

 Low

 V.Low

Proposed Hedgerow Condition

 Good

 Moderate

 N/A

Proposed Hedgerow Distinctiveness

 Medium

 Low

 N/A

Watercourse Proposed Condition

 Fairly Good

 Moderate

 Poor

 N/A

Watercourse Proposed Distinctiveness

 High

 Medium

 Low

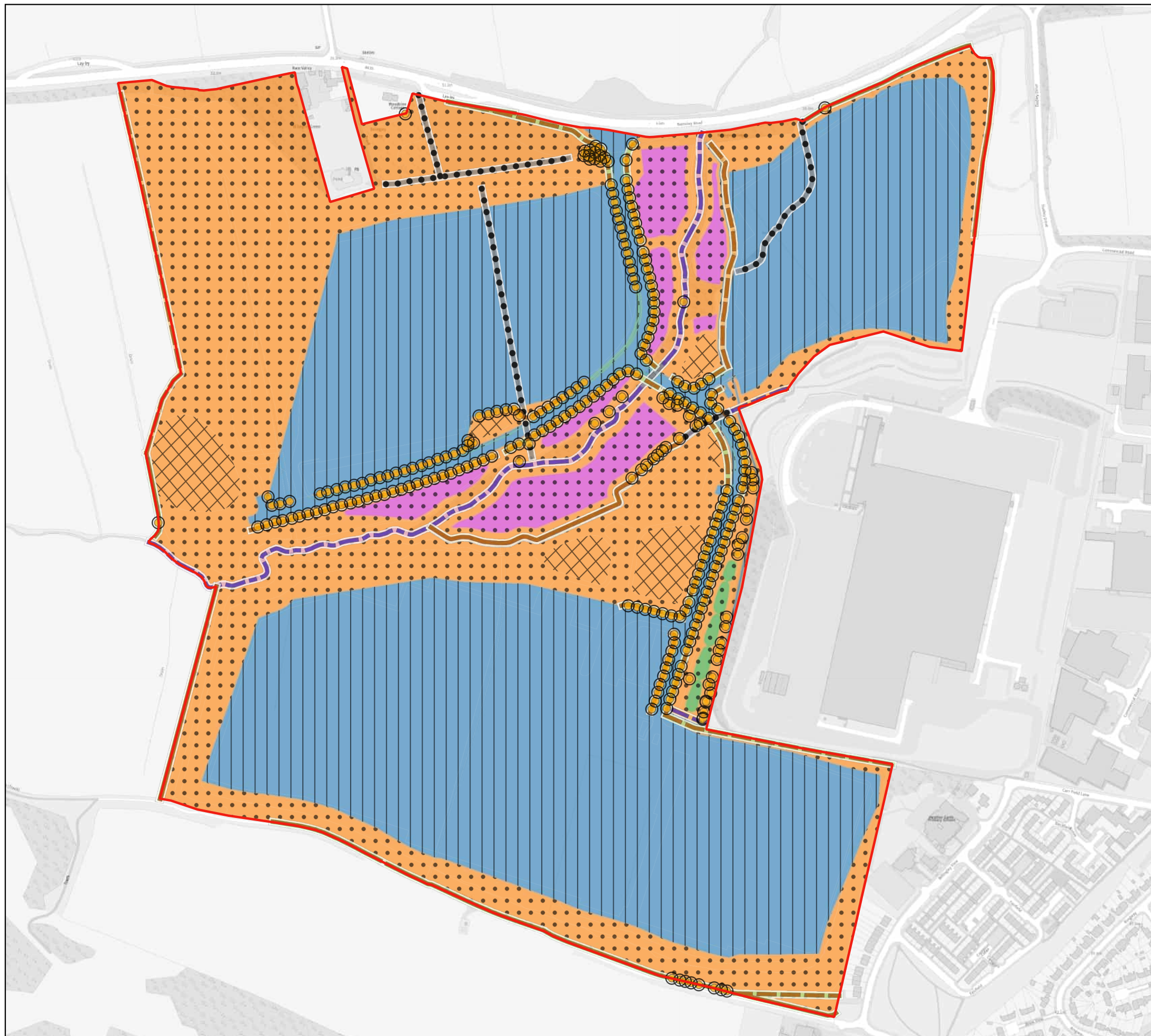
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Proposed Individual Distinctiveness

 Medium

Proposed Individual tree Condition

 Moderate



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PROPOSED HABITAT CONDITION /
DISTINCTIVENESS

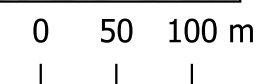
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Figure 5



Appendix A: Statutory Biodiversity Metric Spreadsheet

Appendix B: Habitat Condition Assessment Sheets

Habitats were originally assessed in Biodiversity Metric 3.1 and have been transposed to Statutory Metric for the most recent recalculation.

Ponds

Pond P1: Pond located in conifer plantation in north of Site.

Condition Assessment Criteria		Criterion passed (Yes or No)	Notes (such as justification)
Core Criteria - applicable to all ponds (woodland¹ and non-woodland):			
A	The pond is of good water quality, with clear water (low turbidity) indicating no obvious signs of pollution. Turbidity is acceptable if the pond is grazed by livestock.	N	Algae, water cloudy.
B	There is semi-natural habitat (moderate distinctiveness or above) completely surrounding the pond, for at least 10 m from the pond edge for its entire perimeter.	N	
C	Less than 10% of the water surface is covered with duckweed <i>Lemna</i> spp. or filamentous algae.	N	
D	The pond is not artificially connected to other waterbodies, such as agricultural ditches or artificial pipework.	N	Ditches (partially dry) connect either end of pond
E	Pond water levels can fluctuate naturally throughout the year. No obvious artificial dams ² , pumps or pipework.	Y	
F	There is an absence of listed non-native plant and animal species ³ .	Y	
G	The pond is not artificially stocked with fish. If the pond naturally contains fish, it is a native fish assemblage at low densities.	Y	
Additional Criteria - must be assessed for all non-woodland ponds:			
H	Emergent, submerged or floating plants (excluding duckweed) ⁴ cover at least 50% of the pond area which is less than 3 m deep.	N/A	Within woodland plantation
I	The pond surface is no more than 50% shaded by adjacent trees and scrub.	N/A	Within woodland plantation
Condition: Poor (passes only 3 criteria)			

Grassland: Low Distinctiveness

Modified Grassland 1

Habitat Description		
Sward height between 10 – 45 cm. There was an average of 4 species per m ² making it very species poor. Creeping thistle <i>Cirsium arvense</i> , broad-leaved dock <i>Rumex obtusifolius</i> , spear thistle <i>Cirsium vulgare</i> , prickly sow thistle <i>Sonchus asper</i> , doves-foot cranesbill <i>Geranium molle</i> were all found occasionally. This area was considered to contain a lot of ruderal species. Located in north of Site		
Condition Assessment Criteria	Criterion passed (Yes or No)	Notes (such as justification)
A	N	
<p>There are 6-8 vascular plant species per m² present, including at least 2 forbs (these may include those listed in Footnote 1). Note - this criterion is essential for achieving Moderate or Good condition.</p> <p>Where the vascular plant species present are characteristic of medium, high or very high distinctiveness grassland, or there are 9 or more of these characteristic species per m² (excluding those listed in Footnote 1), please review the full UKHab description to assess whether the grassland should instead be classified as a higher distinctiveness grassland. Where a grassland is classed as medium, high, or very high distinctiveness, please use the relevant condition sheet.</p>		
B	Y	
<p>Sward height is varied (at least 20% of the sward is less than 7 cm and at least 20% is more than 7 cm) creating microclimates which provide opportunities for vertebrates and invertebrates to live and breed.</p>		
C	Y	
<p>Any scrub present accounts for less than 20% of the total grassland area. (Some scattered scrub such as bramble <i>Rubus fruticosus</i> agg. may be present).</p> <p>Note - patches of scrub with continuous (more than 90%) cover should be classified as the relevant scrub habitat type.</p>		
D	Y	
<p>Physical damage is evident in less than 5% of total grassland area. Examples of physical damage include excessive poaching, damage from machinery use or storage, erosion caused by high levels of access, or any other damaging management activities.</p>		
E	N	
<p>Cover of bare ground is between 1% and 10%, including localised areas (for example, a concentration of rabbit warrens)².</p>		
F	Y	
<p>Cover of bracken <i>Pteridium aquilinum</i> is less than 20%.</p>		
G	Y	
<p>There is an absence of invasive non-native plant species³ (as listed on Schedule 9 of WCA⁴).</p>		
Condition: Poor – Does not meet essential criterion A		

Modified Grassland 2

Habitat Description		
Infrequently mown, light tussocks. The three dominant plant species were cow parsley <i>Anthriscus sylvestris</i> , cock's foot <i>Dactylis glomerata</i> and false oat-grass <i>Arrhenatherum elatius</i> . Field margin near Carr Dike		
Condition Assessment Criteria	Criterion passed (Yes or No)	Notes (such as justification)
A	N	
<p>There are 6-8 vascular plant species per m² present, including at least 2 forbs (these may include those listed in Footnote 1). Note - this criterion is essential for achieving Moderate or Good condition.</p> <p>Where the vascular plant species present are characteristic of medium, high or very high distinctiveness grassland, or there are 9 or more of these characteristic species per m² (excluding those listed in Footnote 1), please review the full UKHab description to assess whether the grassland should instead be classified as a higher distinctiveness grassland. Where a grassland is classed as medium, high, or very high distinctiveness, please use the relevant condition sheet.</p>		
B	Y	
<p>Sward height is varied (at least 20% of the sward is less than 7 cm and at least 20% is more than 7 cm) creating microclimates which provide opportunities for vertebrates and invertebrates to live and breed.</p>		
C	Y	
<p>Any scrub present accounts for less than 20% of the total grassland area. (Some scattered scrub such as bramble <i>Rubus fruticosus</i> agg. may be present).</p> <p>Note - patches of scrub with continuous (more than 90%) cover should be classified as the relevant scrub habitat type.</p>		
D	Y	
<p>Physical damage is evident in less than 5% of total grassland area. Examples of physical damage include excessive poaching, damage from machinery use or storage, erosion caused by high levels of access, or any other damaging management activities.</p>		
E	Y	
<p>Cover of bare ground is between 1% and 10%, including localised areas (for example, a concentration of rabbit warrens)².</p>		
F	Y	
<p>Cover of bracken <i>Pteridium aquilinum</i> is less than 20%.</p>		
G	Y	
<p>There is an absence of invasive non-native plant species³ (as listed on Schedule 9 of WCA⁴).</p>		
Condition: Poor – Does not meet essential criterion A		

Grassland: Medium/High/Very High Distinctiveness

All other neutral grassland on-Site – field margins and banks of Carr Dike

Habitat Description			
Mown margin. Grassland height is around 20cm. No bare area. The dominant plant species was Yorkshire fog <i>Holcus lanatus</i> . Less than 5% scrub.			
Condition Assessment Criteria		Criterion passed (Yes or No)	Notes (such as justification)
A	The parcel represents a good example of its habitat type, with a consistently high proportion of characteristic indicator species present relevant to the specific habitat type (and relative to Footnote 3 suboptimal species which may be listed in the UKHab description). ¹ Note - this criterion is essential for achieving Moderate or Good condition for non-acid grassland types only.	Y	
B	Sward height is varied (at least 20% of the sward is less than 7 cm and at least 20% is more than 7 cm) creating microclimates which provide opportunities for insects, birds and small mammals to live and breed.	N	
C	Cover of bare ground is between 1% and 5%, including localised areas, for example, rabbit warrens ² .	Y	
D	Cover of bracken <i>Pteridium aquilinum</i> is less than 20% and cover of scrub (including bramble <i>Rubus fruticosus</i> agg.) is less than 5%.	Y	
E	Combined cover of species indicative of suboptimal condition ³ and physical damage (such as excessive poaching, damage from machinery use or storage, damaging levels of access, or any other damaging management activities) accounts for less than 5% of total area. If any invasive non-native plant species ⁴ (as listed on Schedule 9 of WCA ⁵) are present, this criterion is automatically failed.	Y	
Additional Criterion - must be assessed for all non-acid grassland types			
F	There are 10 or more vascular plant species per m ² present, including forbs that are characteristic of the habitat type (species referenced in Footnote 3 and 5 cannot contribute towards this count). Note - this criterion is essential for achieving Good condition for non-acid grassland types only.	N	
Condition: Moderate (passes 4 criteria including essential criterion A)			

Woodland: Medium/High/Very High Distinctiveness

W1: Coniferous woodland plantation in northern area of Site. Recently planted. dominated by immature Norway spruce *Picea abies* that were between 0.5 and 4 m tall.

W2: Woodland located in the north of the site. Areas were overgrown by scrub. Tree guards were visible on some trees. The area comprised of immature trees. Some areas, particularly in the south, were overgrown with hawthorn *Crataegus mongyna* /dogwood *Cornus sanguinea* scrub. Understorey was predominately ruderal and grasses.

PBW 1-4: All woodland blocks adjacent to Carr Dike included as W3. Woodland found in the north of the site. There were areas that were overgrown by scrub. Tree guards were visible on some trees. The area comprised of immature trees. Some areas, particularly in the south, were overgrown with hawthorn *Crataegus mongyna* /dogwood *Cornus sanguinea* scrub. Understorey was predominately ruderal and grasses.

					Habitat parcel reference										
					W1	W2	PBW1	PBW2	PBW3	PBW4					
Condition Assessment Criteria															
Indicator		Good (3 points)	Moderate (2 points)	Poor (1 point)	Score per indicator										Notes (such as justification)
A	Age distribution of trees	Three age-classes ¹ present.	Two age-classes ¹ present.	One age-class ¹ present.	1	1	1	1	1	2					
B	Wild, domestic and feral herbivore damage	No significant browsing damage evident in woodland ² .	Evidence of significant browsing pressure is present in less than 40% of whole woodland ² .	Evidence of significant browsing pressure is present in 40% or more of whole woodland ² .	3	3	3	3	3	3					

C	Invasive plant species	No invasive species ³ present in woodland.	Rhododendron <i>Rhododendron ponticum</i> or cherry laurel <i>Prunus laurocerasus</i> not present, and other invasive species ³ <10% cover.	Rhododendron or cherry laurel present, or other invasive species ³ ≥10% cover.	3	3	3	3	3	3					
D	Number of native tree species	Five or more native tree or shrub species ⁴ found across woodland parcel.	Three to four native tree or shrub species ⁴ found across woodland parcel.	Two or less native tree or shrub species ⁴ across woodland parcel.	1	3	3	3	3	3					
E	Cover of native tree and shrub species	>80% of canopy trees and >80% of understory shrubs are native ⁵ .	50 - 80% of canopy trees and 50 - 80% of understory shrubs are native ⁵ .	<50% of canopy trees and <50% of understory shrubs are native ⁵ .	1	3	3	3	3	3					
F	Open space within woodland	10 - 20% of woodland has areas of temporary open space ⁶ . Unless woodland is <10ha, in which case 0 - 20% temporary open space is permitted ⁷ .	21 - 40% of woodland has areas of temporary open space ⁶ .	<10% or >40% of woodland has areas of temporary open space ⁶ . But if woodland <10ha has <10% temporary open space, please see Good category ⁷ .	3	3	3	3	3	3					

G	Woodland regeneration	All three classes present in woodland ⁸ ; trees 4 - 7 cm Diameter at Breast Height (DBH), saplings and seedlings or advanced coppice regrowth.	One or two classes only present in woodland ⁸ .	No classes or coppice regrowth present in woodland ⁸ .	1	1	1	1	1	1					
H	Tree health	Tree mortality 10% or less, no pests or diseases and no crown dieback ⁹ .	11% to 25% tree mortality and or crown dieback or low-risk pest or disease present ⁹ .	Greater than 25% tree mortality and or any high-risk pest or disease present ⁹ .	3	3	3	3	3	3					
I	Vegetation and ground flora	Recognisable NVC plant community ¹⁰ at ground layer present, strongly characterised by ancient woodland flora specialists.	Recognisable woodland NVC plant community ¹⁰ at ground layer present.	No recognisable woodland NVC plant community ¹⁰ at ground layer present.	1	1	1	1	1	1					
J	Woodland vertical structure	Three or more storeys across all survey plots, or a complex woodland ¹¹ .	Two storeys across all survey plots ¹¹ .	One or less storey across all survey plots ¹¹ .	1	2	2	2	1	1					
K	Veteran trees	Two or more veteran trees ¹² per hectare.	One veteran tree ¹² per hectare.	No veteran trees ¹² present in woodland.	1	1	1	1	1	1					

L	Amount of deadwood	50% of all survey plots within the woodland parcel have deadwood, such as standing and fallen deadwood, large dead branches and or stems, branch stubs and stumps, or an abundance of small cavities ¹³ .	Between 25% and 50% of all survey plots within the woodland parcel have deadwood, such as standing and fallen deadwood, large dead branches and or stems, stubs and stumps, or an abundance of small cavities ¹³ .	Less than 25% of all survey plots within the woodland parcel have deadwood, such as standing and fallen deadwood, large dead branches and or stems, stubs and stumps, or an abundance of small cavities ¹³ .	1	1	2	1	1	1					
M	Woodland disturbance	No nutrient enrichment or damaged ground evident ¹⁴ .	Less than 1 hectare in total of nutrient enrichment across woodland area, and or less than 20% of woodland area has damaged ground ¹⁴ .	1 hectare or more of nutrient enrichment, and or 20% or more of woodland area has damaged ground ¹⁴ .	2	2	3	3	3	3					W1: Machinery present and damaged ground. W2: Machinery and pheasant feeding areas.
Total Score (out of a possible 39)					22	27	29	28	27	28					
Condition					Poor	Mod.	Mod.	Mod.	Mod.	Mod.					

A2.	Width	>1.5 m average along length	<p>The average width of woody growth estimated at the widest point of the canopy, excluding gaps and isolated trees.</p> <p>Outgrowths (such as blackthorn <i>Prunus spinosa</i> suckers) are only included in the width estimate when they are >0.5 m in height.</p> <p>Laid, coppiced, cut and newly planted hedgerows are indicative of good management and pass this criterion for up to a maximum of four years (if undertaken according to good practice).</p>	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	
B1.	Gap - hedge base	Gap between ground and base of canopy <0.5 m for >90% of length	<p>This is the vertical 'gappiness' of the woody component of the hedgerow, and its distance from the ground to the lowest leafy growth.</p> <p>Certain exceptions to this criterion are acceptable (see page 65 of the Hedgerow Survey Handbook).</p>	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	
B2.	Gap - hedge canopy continuity	Gaps make up <10% of total length; and No canopy gaps >5 m	<p>This is the horizontal 'gappiness' of the woody component of the hedgerow. Gaps are complete breaks in the woody canopy (no matter how small).</p> <p>Access points and gates contribute to the overall 'gappiness' but are not subject to the >5 m criterion (as this is the typical size of a gate).</p>	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	

D2.	Current damage	>90% of the hedgerow or undisturbed ground is free of damage caused by human activities.	This criterion addresses damaging activities that may have led to or lead to deterioration in other attributes. This could include evidence of pollution, piles of manure or rubble, or inappropriate management practices (for example, excessive hedgerow cutting).	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Additional group - applicable to hedgerows with trees only														
E1.	Tree class	There is more than one age-class (or morphology) of tree present (for example: young, mature, veteran and or ancient ⁸), and there is on average at least one mature, ancient or veteran tree present per 20 - 50m of hedgerow.	This criterion addresses if there are a range of age-classes or morphologies which allow for replacement of trees and provide opportunities for different species.	Y	N/A	N/A	Y	N	N/A	N	N/A	N/A	N/A	N/A
E2.	Tree health	At least 95% of hedgerow trees are in a healthy condition (excluding veteran features valuable for wildlife). There is little or no evidence of an adverse impact on tree health by damage from livestock or wild animals, pests or diseases, or human activity.	This criterion identifies if the trees are subject to damage which compromises the survival and health of the individual specimens.	Y	N/A	N/A	Y	Y	N/A	Y	N/A	N/A	N/A	N/A

APPENDIX 2 - FRAMEWORK LANDSCAPE & ECOLOGY MANAGEMENT PLAN



Equites Newlands (Goldthorpe) Ltd.

Land South of Dearne Valley Parkway, Goldthorpe

FRAMEWORK LANDSCAPE & ECOLOGY MANAGEMENT PLAN

November 2024

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Table 2: Management prescriptions & Work Programme

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Figure 1: Hedgerow Management Cycle

Figure 2: Scrub Management Example

Figure 3: Log Pile Example

1.0 INTRODUCTION

- 1.1 This Framework Landscape & Ecology Management Plan (FLEMP) has been prepared by FPCR Environment & Design Ltd. on behalf Equites Newlands (Goldthorpe) Ltd. This document provides a framework document outlining the landscape and ecological management approaches for the proposed Land Off Barnsley Road, Goldthorpe development ('the Site').
- 1.2 The main area of the Site is allocated within the Barnsley Metropolitan Borough Council (BMBC) Local Plan REF) named as allocation ES10. The Site is the subject of a hybrid planning application, which is currently being determined, pursuant to application reference 2023/1105 for *“Hybrid Planning Application: Outline permission sought for the construction of Storage and Distribution (Use Class B8) and General Employment (Use Class B2) space with ancillary offices and gatehouses. All matters reserved except for site access. Full permission sought for engineering infrastructure works to support the employment development comprising: the access roads; earthworks to create the development platform zones/bunding; drainage and culvert works; a flood compensation area; and strategic landscaping areas.”*
- 1.3 The LEMP provides details on the management of proposed and retained habitats within the development, and follows guidance set out in British Standard 42020:2013.
- 1.4 The LEMP has been informed by the following documents and with proposals for management designed with the aim of meeting requirements as set out therein:
- BCA Design Landscape Architects. Landscape Location Plan [GDT-BCA-ELS-XX-DR-L-2267/22-02-S4-P11 (subject to future change)]
 - FPCR June 2023 Ecological Appraisal Land Off Barnsley Road, Goldthorpe.
 - FPCR December 2023 Biodiversity Net Gain Report. [Revision D].

Site Context and Description

- 1.5 The Site lies to the west of the town of Goldthorpe on farmland, south of the A635 Barnsley/Doncaster Road and adjacent to the west of Aldi Goldthorpe Regional Distribution Centre. Carr Dike bisects the Site flowing in a general south-westerly direction from Barnsley/Doncaster Road in the north-east of the Site. Dearne Valley Wetlands Site of Special Scientific Interest (SSSI) lies to the south-west with the land between dominated by large cultivated arable fields.
- 1.6 The Site at the time of survey, comprised predominately large arable fields with boundary features which include plantation woodland, Carr Dike (stream), a wet ditch (connecting to Carr Dike), and native hedgerows with associated mature trees. A small pond was located in the north of the Site adjacent to a small conifer plantation.
- 1.7 The proposed development is to be subject to a hybrid planning application with shared infrastructure, open space and habitat creation included in a full planning application and the development plots to be included in an outline application.
- 1.8 Details of the proposed open spaces and green infrastructure are provided in the BCA Design Landscape Masterplan.

2.0 GENERAL CONSIDERATIONS

Health and Safety

- 2.1 Care is to be taken to consider the health and safety aspects of the landscape proposals at all times during the design and construction process of the development, ensuring that the future management of the landscape can be carried out in a safe manner.
- 2.2 The landscape management should be assessed and, where practicable, risks should be reduced or eliminated. In particular, hazards should be considered that may exist on Site such as:
- maintenance works near highways.
 - works involving the use of cutting machinery and potentially hazardous chemical agents.
 - works near buried services and overhead services and frequently a combination of these.
- 2.3 To this end, the organisation responsible for management of the landscape areas is to address health and safety matters as required and in accordance with good practice. Working practices should have consideration to industry standard current best practice in landscaping works.

Legislation

- 2.4 All relevant EU and UK nature conservation law will be adhered to in relation to the protection of ecological features and ecological enhancement. For this development, this will include the protection afforded to all species of birds, particularly ground nesting species, under the Wildlife and Countryside Act 1981 (as amended).

Birds

- 2.5 The Wildlife and Countryside Act 1981 (as amended) is the principal legislation affording protection to UK wild birds. Under this legislation all birds, their nests and eggs are protected by law, and it is an offence, with certain exceptions to recklessly or intentionally:
- kill, injure, or take any wild bird.
 - take, damage, or destroy the nest of any wild bird while in use or being built.
 - take or destroy the egg of any wild bird.
- 2.6 Certain species listed on Schedule 1 of the Wildlife and Countryside Act 1981 (as amended) are specially protected at all times. This extends their protection whereby they are protected against intentional disturbance whilst building or occupying a nest, and against disturbance of dependent young.

3.0 MANAGEMENT PLAN AIMS & OBJECTIVES

- 3.1 The proposed landscape areas comprise a mix of grassland, woodland, woodland edge/scrub, attenuation ponds/basins, individual trees, hedgerows.
- 3.2 The key management aims are:
- to enhance the biodiversity value of the site and local area in the long term based on newly created habitats on-site as quantified by the Statutory Biodiversity Net Gain Metric.

- to create habitats which compensate for habitats lost to the development that support faunal species, mitigate impacts to faunal species, and enhance habitats to further support a range of faunal species at the Site.
- to maintain a quality, neat, tidy, safe, useable, and attractive landscape setting to built-development through appropriate management of landscape areas on the site.
- to achieve rapid establishment of habitats suppressing weed growth and reducing maintenance requirements whilst creating habitats with wildlife and biodiversity value as soon as possible.

3.3 To achieve the above aims, the management prescriptions outlined in Table 2 will be undertaken during the period of the plan and will therefore seek to achieve the following objectives:

- ensure the successful establishment of new habitats and the safeguarding of retained habitats, which increases Site's and local area's biodiversity.
- maintain and increase opportunities for local wildlife through appropriate management.
- secure the health and retention of created habitats, with defects identified early and promptly addressed, with habitats kept free of unwanted flora, and through replacement of diseased or damaged flora, as necessary.
- monitor key habitats throughout the life of the management plan to ensure management prescriptions remain suitable.
- create additional micro-habitats within the Site such as log piles, bat boxes, and bird boxes which provides additional shelter and foraging opportunities (the locations of which will be detailed in a separate document be secured via a separate appropriately worded planning condition).
- enable a balance between providing an environment suitable for wildlife and ensuring a site suitable for its end-use.

4.0 MANAGEMENT PLAN CONTEXT

- 4.1 This plan is intended to be a Framework document that will be further developed with the production of a detailed Landscape Management and Monitoring Plan/s (LEMP) upon completion of final BNG calculations for the phases of the development. Management will be secured for 30 years to ensure that all features will be managed and monitored to achieve the aims and objectives of the final BNG report/s.
- 4.2 This plan identifies the landscape features which require management; this includes:
- habitats that will be retained and created and subsequently maintained for visual and biodiversity objectives.
 - Faunal features that will be located within the development for biodiversity objectives.
- 4.3 Specific landscape and ecological objectives for each feature are described in Table 1, with information regarding the indicative target condition of each feature under the BNG metric and specific criteria that should be followed in order to attain that target condition.
- 4.4 Monitoring is an essential part of any management plan and is discussed further in Section 7.0. Table 1 details the monitoring regime, indicators that show the landscape and ecological objective has been achieved, and remedial actions if this objective has not been achieved.
- 4.5 Table 2 details management prescriptions and the programme of works which are considered necessary to achieve the landscape and ecological objective for each feature as described in Table 1; these have been

considered at the construction and post-construction phases and include details of plant species and planting techniques to be used within the construction phase. The programme of works provides an initial 5-year management regime to ensure establishment of habitats.

- 4.6 Management prescriptions will be reviewed after 5 years and regularly after that, with prescriptions updated if necessary to ensure an optimal management regime for achieving the aims and objectives. Further detailed programme information covering a 30-year period will be provided in a detailed HMMP document.
- 4.7 No constraints to landscape management have been identified for this development.

5.0 DESCRIPTION & EVALUATION OF LANDSCAPE FEATURES

- 5.1 Habitats to be retained or created are detailed in the indicative landscape plan (Appendix A), the plan remains indicative and subject to minor change but the broad locations. Locations of recommended faunal features are to be decided at a later date (to be secured via a separate appropriately worded planning condition).

Features To Be Retained Or Created

Retained Habitats

- 5.2 Carr Dike, a watercourse running through the Site and a drainage ditch that issues into Carr Dike will be retained and the habitats on the banks and banktops will be enhanced (where possible). Grassland habitats along the banks will be managed as wet grassland (which may be inundated in times of high water). Scrub will be thinned and controlled to prevent overshadowing the watercourse. Marginal planting may be undertaken where appropriate at the base of the banks and edges of the water.
- 5.3 Existing broadleaved woodland plantation situated within the corridor of Carr Dike and areas on the northern Site boundary will be retained. Where appropriate the woodland will be managed to enhance the structure and composition, with areas thinned and cleared to create small glades and rides and areas which will be allowed to regenerate naturally to provide structural diversity within the woodland. Species indicative of nutrient enrichment (such as common nettle and cleavers) will be removed and due to change in management of adjacent habitats (from arable agricultural) nutrients will decrease naturally over time allowing a more naturally diverse ground flora to develop. Within cleared areas ground flora seeding may be undertaken using an appropriate woodland wildflower mix (such as Emorsgate EW1 Woodland Mixture, or a suitable alternative). Features will be provided (where appropriate) to benefit local wildlife particularly willow tit (listed on the designation for the nearby Dearne Valley Wetlands SSSI). Any invasive non-native species will be removed.
- 5.4 A number of hedgerows located predominately on the periphery of the Site will be retained and managed to achieve at least moderate condition, with additional hedgerow trees to be planted (where appropriate). In order to achieve the desired condition the following management should be applied: The width and height should be kept at a minimum of 1.5m and gaps in the canopy should be minimal. For at least 90% of the length of the hedgerows, a 1m wide grassland buffer should be incorporated into the management of adjoining grassland. The hedgerow and grassland buffer should be kept free of invasive and non-native species.
- 5.5 Selected individual trees will be retained across the Site.

Proposed Habitat CreationIndividual (Urban) Trees

- 5.6 The landscape plans indicate that 660 individual trees will be planted (although some of these are noted to be associated with areas of woodland, scrub and hedgerow creation). The final number and condition of individual trees will be confirmed with the production of the final BNG calculation/s and report/s and the accompanying LEMP document/s. Individual trees will include a mix of extra heavy standards, heavy standards, and small feathered trees. Trees will include only native species (and variants), with a proportion of the trees being those that flower and provide fruit/nuts (for foraging wildlife), the exact number and species will be confirmed within the future HMMP document.
- 5.7 Once established any tree guards provided will be removed from individual specimens. This is usually done around year 5 and would be determined during maintenance.

Modified (Amenity) Grassland – Proposed Close Mown Grass

- 5.8 New short-sward modified (amenity) grassland will be established on some road verges around the Site and managed to provide a neat and visually pleasing greenspace. These areas of modified grassland will be managed to achieve moderate condition. This should be sown with a hardwearing seed mix (such as Naturescape NL4 Hardwearing Lawn Mixture, Emorsgate EG22 Strong Lawn Grass Mixture, or suitable equivalent) to be sown as per the manufacturer's instructions.
- 5.9 The grassland will be managed to ensure it is free of bracken, scrub invasive and non-native species¹. The grass will be mown often to allow visibility splays and occasional pedestrian usage; however, the mowing will be carried out sympathetically to achieve the desired condition criteria. If bare ground develops, these areas should be reseeded to ensure bare ground does not exceed 5% of the modified grassland area.

Other Neutral Grassland – Proposed Wildflower Grass

- 5.10 To achieve moderate condition a diverse sward is required, and this is often dependent on soil chemistry having a reduced nutrient load. These areas will be subject to a topsoil strip, soils will be removed for use elsewhere within the Site (such as development plateaus), the removal of soils will aid in the reduction of soil nutrient content. Soil testing will be undertaken subsequent to habitat creation to determine whether any additional measures would be required to prepare the soil to gain moderate condition.
- 5.11 Areas shown to be "Proposed Wildflower Grass" should be sown with a species rich grassland seed mix (such as Naturescape N5 Long Season Meadow Mixture, Emorsgate EM3 Special General-Purpose Meadow Mixture or suitable equivalent), to be sown as per the manufacturer's instructions.
- 5.12 The area around Carr Dike will continue to provide high quality grassland habitat for marsh harrier forage/hunting. Marsh harriers were noted to be present at the Site in 2020 and have bred at the nearby RPSB Old Moor reserve. The western area of the Site has been designed to continue to provide habitat suitable for marsh harriers, following consultation with RSPB and BMBC.
- 5.13 Mowing should be avoided from March until August to allow flowering species to set seed and provide the maximum benefit for invertebrates and birds. Additionally mowing will be delayed until late-September to allow juvenile marsh harriers to forage before dispersal. After the first cut in late-September, cuttings should be left for 48 hours and then removed. Mowing/strimming can be undertaken twice between October and March (as required). The grassland should be kept free of any non-native and invasive plant species.

Other Neutral Grassland (Wet) – Proposed Wet Wildflower Grassland

- 5.14 To achieve moderate condition a diverse sward is required, and this is often dependent on soil chemistry having a reduced nutrient load. This area will be subject to a topsoil strip and subsoil removal to create the flood attenuation basin, soils will be removed for use elsewhere within the Site (such as development plateaus), the removal of soils will aid in the reduction of soil nutrient content. Soil testing will be undertaken subsequent to habitat creation to determine whether any additional measures would be required to prepare the soil to gain moderate condition.
- 5.15 Areas specified as "Proposed Wet Wildflower Grassland" will be sown with a species rich wet grassland mix suitable for seasonally wet conditions that will be present within the flood attenuation areas (such as N7 Wetland Meadow Mixture, Emorsgate EM8 Meadow Mixture for Wetlands, or suitable equivalent), to be sown as per the manufacturer's instructions. These grass mixtures include species that will create tussocky features (such as crested dogstail, tufted hair grass, and tall fescue). On the periphery of the wet areas including an additional tussocky grassland mix (such as Emorsgate EM10 Tussock Meadow Mix or suitable equivalent) will provide additional opportunities for diversity and structure in the wider grassland habitat as it transitions to dryer conditions.
- 5.16 The grassland will be provided with scrapes and set within basin areas that will provide seasonally wet conditions and shallow ephemeral waterbodies. The grassland in these areas will be managed to provide a tussocky structure and will be left to grow tall during the summer providing habitat for invertebrates, ground nesting and foraging birds, small mammals, and amphibians. This area will provide high quality forage/hunting habitat for marsh harrier.
- 5.17 Mowing should be avoided from March until August to allow flowering species to set seed and provide the maximum benefit for invertebrates and birds. Additionally mowing will be delayed until late-September to allow juvenile marsh harriers to forage before dispersal. After the first cut in late-September, cuttings should be left for 48 hours and then removed. Mowing/strimming can be undertaken twice between October and March (as required). The grassland should be kept free of any non-native and invasive plant species.
- 5.18 The proposed habitat/flood alleviation areas in the west and north of the Site will be provided with appropriate fencing (likely wooden post and rail) to deter use of the areas by the public and reduce any potential impacts to these habitats and their condition.

Attenuation Ponds (non-priority) and Marginal Planting

- 5.19 Seven individual attenuation ponds will be created within the shared areas of the Site. For all ponds, the water table should be maintained throughout the year to provide areas of permanently wet open water.
- 5.20 Marginal planting will be suitable on the edges of the ponds and will provide food and shelter to wildlife as well as adding variety and structure to habitats. The habitat value of the open water is enhanced if there are a variety of vegetation structures within it, from dense tussocks to bare and recently colonised earth.
- 5.21 No more than 50% of the pond should be shaded by vegetation on the banks. Maintenance should ensure there are no non-native plant or animal species present in the pond and the ponds should not be artificially stocked with fish. Duckweed and filamentous algae should be kept to a minimum. Any cutting of marginal planting should be avoided from February to August to avoid amphibian and breeding bird seasons.
- 5.22 Species to be planted in/adjacent to the ponds will be provided in more detail in the future HMMP document. Suitable aquatic plants may include; Spiked water-milfoil *Myriophyllum spicatum*, Rigid hornwort *Ceratophyllum demersum* and pond weeds *Potamogeton species*. Suitable marginal species include;

¹ Wildlife and Countryside Act, Schedule 9 Species. List accessed via: <https://www.legislation.gov.uk/ukgpa/1981/69/schedule/9>

common reed *Phragmites australis*, Yellow flag iris *Iris pseudacorus*, marsh marigold *Caltha palustris*, water dock, Water forget-me-not *Myosotis scorpiodes*, Water mint *Mentha aquatica*, and Brooklime *Veronica beccabunga*.

5.23 Planting on the banks of ponds may include; hard rush *Juncus inflexus*, soft rush *Juncus effusus*, pond sedges *Carex species*, and grasses suitable for damp/wet conditions. A pond edge seed mix may also be appropriate (such as Habitat Aid Pond Edge Seed Mix, Naturescape N8 Water's Edge, Meadow Mix, Emorsgate EP1 Pond Edge Mixture, or suitable equivalent).

5.24 Species which may become invasive such as reedmace *Typha latifolia* should be avoided or controlled with regular maintenance.

Sustainable Urban Drainage Features

5.25 A chain of five small attenuation ponds/basins will be located in the eastern area of the Site to create a cascading water feature. It is anticipated that this will be wet for the majority of the year but may occasionally dry. This area will be seeded/planted with the same grassland mix as the adjacent Other Neutral Grassland (wildflower grassland) with margins seeded with an appropriate pond edge mix.

Native Hedgerows

5.26 Native hedgerows will be created and will also provide resources for foraging and sheltering wildlife; the hedgerows should be managed to maximise these opportunities.

5.27 Hedgerows in some areas will be managed to have a formal appearance but should still be planted with native species only and managed to provide moderate habitat condition. To meet required width hedgerows should be planted in a staggered double row.

5.28 In order to achieve the desired condition the following management should be applied to all hedgerows: The width and height should be kept at a minimum of 1.5m and gaps in the canopy should be minimal. For at least 90% of the length of the hedgerows, a 1m wide grassland buffer should be incorporated into the management of adjoining grassland. The hedgerow and grassland buffer should be kept free of invasive and non-native species.

5.29 Hedgerows should be cut in an 'A' profile to promote a healthy base. They should only be cut once a year between September and January when nesting birds are likely to be absent and during frost free periods. Where possible, the location of the cut should be rotated annually to ensure year-round foraging resources are available and as some species will only form flowers and subsequently berries, on the previous year's growth.

5.30 In the long term, hedgerows will be taken through a Hedgerow Management Cycle (HMC)² (see Figure 1). The ten steps of the HMC are shown below. The cycle shows a healthy green core and two unhealthy red offshoots. The aim should be to keep the hedge in the green part (steps 3 to 8), periodically laying or coppicing it, with trimming at appropriate intervals in between. If the hedge is not permitted to go through this cycle, it will either, if cut too often, become short and gappy (steps 1 – 3) or, if neglected, develop into a line of trees (steps 8 to 10).

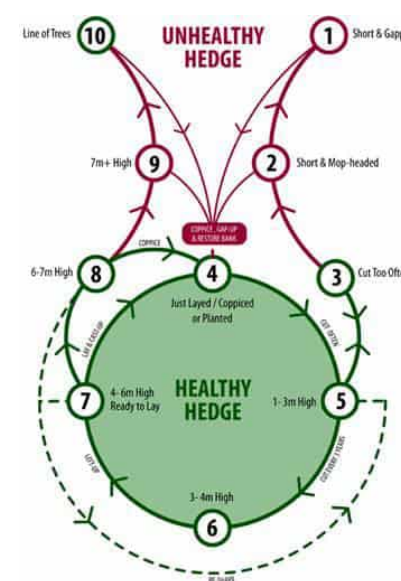


Figure 1: Hedgerow Management Cycle

Other Woodland: Broadleaved – Proposed Woodland Mix Planting

5.31 The other broadleaved woodland habitat is targeted for moderate condition although efforts will be made to achieve good condition, if possible, by the end of 30years. The following condition criteria should be targeted as per the DEFRA Biodiversity Metric:

- Five or more native tree or shrub species found across woodland parcel
- >80% of canopy trees and >80% of understory shrubs are native.
- Two woodland storeys across all survey plots.
- No excessive damage from herbivores.
- Three classes of regeneration present.
- Between 25% and 50% of all survey plots within the woodland parcel have deadwood, such as standing deadwood, large dead branches and or stems, stubs and stumps, or an abundance of small cavities.
- No invasive species present.
- 10-20% of woodland has temporary open space (glades and rides).

5.32 Native species are to be planted to ensure that at least five species are present in any 10m² area. Optimum time for planting is October to March though it is recommended to avoid periods during and immediately after heavy rainfall. Each plant will require a biodegradable spiral guard (to prevent herbivore damage) fixed to a wooden stake. Planting will be irregular with clumps of trees rather than regular lines; this will promote diversity in the structure and composition allowing for natural regeneration and growth of understorey within glades and rides. Non-native saplings should be removed, reducing the cover of non-native species within the understorey.

5.33 Once the woodland trees are established, further planting of shrubs may be necessary to assist in the development of a shrub understorey. Appropriate native understorey species will be selected if required and planted as whips.

² The Hedge Management Cycle (HMC). Art work by Will Field. Management Cycle concept developed by Nigel Adams. Hedgelink UK

- 5.34 Regular coppicing and maintenance of scrub understorey will increase the diversity of the vertical structure of the woodland and aid regeneration. Materials created from coppicing/maintenance should be left on-Site to increase deadwood provision (where appropriate).
- 5.35 Within more open areas (glades/rides) seeding will be undertaken with an appropriate wildflower seed mix (such as Emorsgate EW1 Woodland mixture, or suitable alternative) to promote the establishment of a diverse woodland ground flora. Clear areas of undesirable species indicative of high nutrients which may out compete a more natural ground flora (e.g. common nettle, ivy, cleavers, bracken). Although areas of bramble are to be encouraged, large areas of monoculture (often of ivy, bramble, nettles, or bracken) should be controlled to promote diversity through the ground and shrub layers.
- 5.36 Through changed management of adjacent grassland areas (from previous arable agricultural) nutrients will naturally decrease over time within the woodland areas.
- 5.37 Brush and cuttings from Site vegetation clearance and ongoing maintenance should be left in log piles or as individual logs across woodland areas to develop a deadwood resource. In established woodlands small numbers of trees may be targeted for management to provide additional deadwood features – an arboriculturist should be consulted on how to best locate and achieve deadwood features on live trees and standing deadwood. (Details and the number and location of features can be secured via a separate appropriately worded planning condition).
- 5.38 For established woodlands if herbivore damage is present and considered excessive appropriate fencing/deer fencing may be installed to reduce or prevent damage.
- 5.39 Any invasive species that colonise should be treated or removed immediately.

Mixed Scrub – Proposed Thicket Mix Planting

- 5.40 Areas of scrub planting are proposed around the Site, including areas that will provide a woodland edge structure, grading from woodland to scrub and then to grassland. These areas of mixed scrub will be planted with native species only (to be confirmed within the future HMMP document). Where scrub is situated in the vicinity of watercourses, wet woodland areas and ponds species will be those that are tolerant to wet conditions.
- 5.41 Native species will be planted with a mix of at least three woody species (species to be determined and will be provided in future BNG and HMMP documents).
- 5.42 No one species should comprise more than 75% of the scrub cover and should be planted in clumps with gaps between to achieve a mosaic habitat. Management should create and maintain a range of features; a diversity of age and structure is essential. This can be achieved through rotationally creating cleared areas (glades) to allow space for seedlings, similar to the example in Figure 2.
- 5.43 Rotational cutting/ strimming of vegetation is recommended. Clearings should be cut every 1-2 years. The edge of the scrub should be cut every 3-7 years and depending on growth rates, the low marginal scrub may need cutting on a rotation of up to 12 years to avoid it developing into woodland. After cutting the arisings should be left for a week or so and a proportion can be left in the developed scrub area to decay and provide dead wood habitat, the rest can be removed from Site.
- 5.44 Once established any tree guards provided will be removed from individual specimens. This is usually done around year 5 and would be determined during maintenance.
- 5.45 The development of an edge habitat should be encouraged which will create a transitional habitat with habitat niches between scrub and the adjacent grassland including some scattered woody species, tall grasses, and herbs.

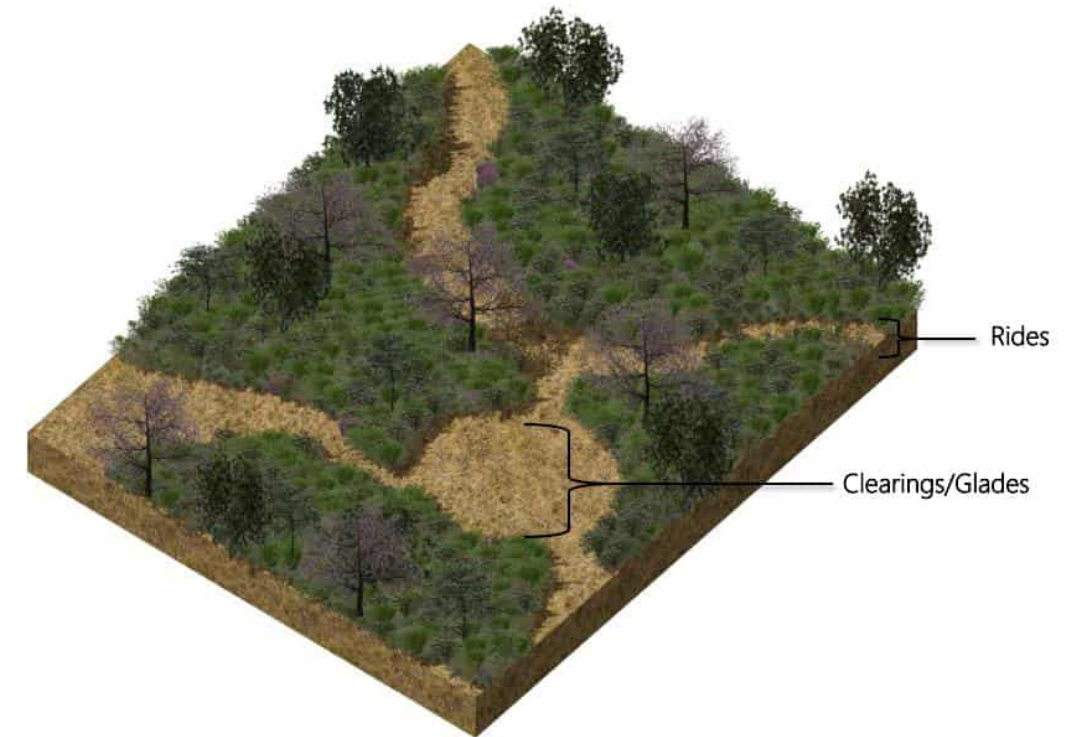


Figure 2 – Scrub management example

Introduced Shrub – Proposed Shrub Planting

- 5.46 Small areas of roadside planting will be provided as low growing ornamental shrub, to allow visibility for road users and amenity value to users of the Site. Species will be confirmed within the detailed final BNG and HMMP documents.

Recommended Faunal Features

- 5.47 The following faunal features are recommended to be provided throughout the Site; suitable locations will be provided in the future HMMP documentation. The number of features and locations would be subject to a separate appropriately worded planning condition.

Log piles

- 5.48 Log piles should be provided in areas within scrub areas, woodland edges, and in proximity to attenuation ponds. Areas of approximately 1x3m should be selected to for log piles, providing shade and shelter for amphibians, invertebrates, and small mammals (See Figure 3). Wood from trees and hedgerows cleared for the development should be used to construct log piles.

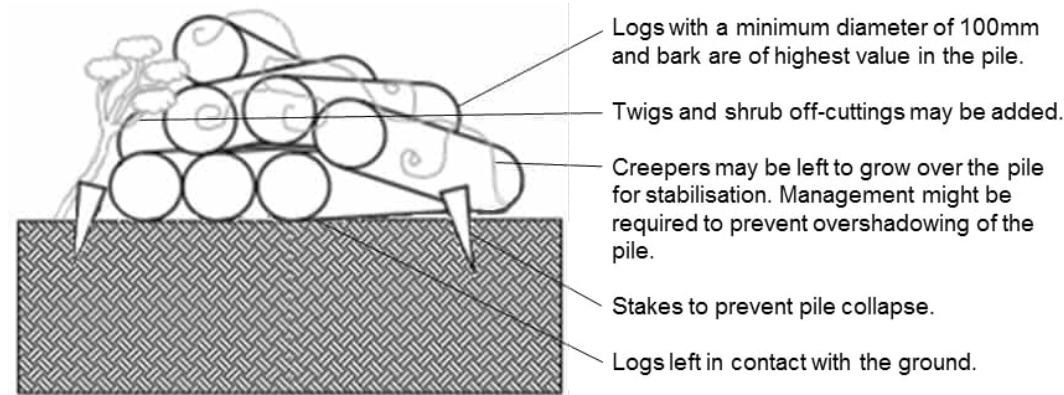


Figure 3: Log Pile Construction

Bird boxes

- 5.49 The details and locations of bird boxes will be provided in a separate plan/document to be secured via an appropriately worded planning condition.
- 5.50 Bird boxes may be provided on retained individual trees and edges of retained woodland. Locations for bird boxes will avoid the Carr Dike corridor which will be targeted to provide willow tit habitat and features.
- 5.51 A mix of bird boxes may be provided with varied sizes of holes. Boxes should be sited away from direct sunlight and prevailing wind direction. Spaced away from other nest boxes to deter overlapping breeding territories and in positions away from branches to deter predators reaching the boxes.
- 5.52 Boxes should be checked every five years to determine if maintenance is required, between September and January (only after the box has been abandoned) and cleaned (if required) without using chemicals or insecticides.

Willow Tit Habitat Features

- 5.53 The details and locations of willow tit habitat features will be provided in a separate plan/document to be secured via an appropriately worded planning condition.
- 5.54 Woodland management in areas along Carr Dike (as prescribed above) will look to create habitats suitable for willow tits. These woodlands will include small glades and rides creating routes through the woodland and scrapes and depressions within the woodland to encourage wet conditions. Understorey development will be encouraged through management to provide a shrub layer within the woodlands. Scrub areas on the woodland edge will also provide habitat of benefit to willow tits.
- 5.55 Deadwood features will be provided within woodland. Any existing standing deadwood that is safe to retain should be retained within woodlands. Where possible deadwood will be sourced from material cleared on-site and features provided to encourage willow tit. This will include providing nest features by attaching decaying logs of birch or willow 10-20cm in diameter to existing trees (using wire and staples) at a height of around 1.5m from ground level.
- 5.56 Deadwood should be inspected every five years and replaced with new wood if old features have become too deteriorated.

External bat boxes

- 5.57 The details and locations of bat boxes will be provided in a separate plan/document to be secured via an appropriately worded planning condition.

- 5.58 External bat boxes will be installed around the development retained individual trees or within retained woodland areas.
- 5.59 Suitable boxes will be those designed for common and widespread crevice dwelling bats (such as the Nestbox company Eco Bat Box, Schwegler 2F bat box) and boxes designed for Noctule bats (Schwegler 2FN). Boxes should be located at a height of around 4m and positioned in a cluster of three boxes facing different aspects avoiding the prevailing wind direction and strong sunlight. Boxes should not be installed adjacent to limbs and without foliage obscuring the flight path to the box. Boxes should not be installed in areas disturbed by artificial lighting.
- 5.60 External bat boxes should be visually inspected every five years, to determine whether maintenance is required (woodcrete boxes should last for up to 25 years). However, once installed, bat boxes must only be opened by a licensed bat worker.

Mammal Ledge and Underpass

- 5.61 A mammal ledge will be installed within the proposed culvert crossing point of Carr Dike. A mammal underpass (suitable for otters, badgers, and other small mammals) will be provided adjacent to the proposed culverted crossing point of the drainage ditch tributary of Carr Dike.
- 5.62 Each end of the proposed ledge and underpass will be managed to remain free of scrub/tree growth and other obstructions allowing a clear path to and from the crossing points.
- 5.63 Maintenance will include checking the features regularly to ensure they are not obstructed or in disrepair.

6.0 RESPONSIBILITY FOR IMPLEMENTATION

- 6.1 Responsibility for the management of soft landscaping and habitats will, for the initial 1 year after Practical Completion, be maintained by the Landscape Contractor responsible for implementation of the works. The contract will include a defects liability clause to ensure replacement planting is carried out and successful establishment achieved.
- 6.2 Thereafter maintenance contracts will be organised by facilities management on an annual basis.
- 6.3 Further details of specific roles and responsibilities will be provided within future HMMP documentation.

7.0 MONITORING

- 7.1 In order to ensure that the habitats created within the Site reach the aims and objectives of the management plan, all habitats will be monitored with the following monitoring aims:
- to confirm the establishment of habitats.
 - to ensure that the proposed management is being implemented.
 - to ensure management is achieving desired objectives.
 - to respond to unexpected outcomes from management.
 - to identify and address any previously unforeseen impacts.
- 7.2 The soft landscaping areas will be monitored every other year after habitat creation for the first five years to determine the health of habitats. This monitoring does not need to be undertaken by a qualified ecologist

but should be carried out by a suitably experienced person (landscape professional) who can accurately identify the habitats that are establishing and determine plant health.

- 7.3 Monitoring of non-habitat measures such as species refuges should also be carried out as per the work programme (Table 2) to ensure that they remain in good condition and are located in optimum locations.
- 7.4 Results of this monitoring should be reported to those members of staff involved in ongoing Site management.
- 7.5 In years 2, and 4 inspections are to be undertaken by a qualified ecologist will provide on-going data for the Site, for future surveys to be monitored against and to determine the frequency of further monitoring as well as determine the progress for establishment of habitats and progress towards target conditions. Further detailed ecological surveys should then be carried out at every five years and at the completion of this plan (Year 30) to determine the condition of habitats and inform further management actions (if required)
- 7.6 A bird survey will be conducted by a suitably qualified and experienced ecologist to cover the entire Site undertaken in the year of occupation of the first development plot. Further surveys will be conducted in subsequent years at 3, 5, 10 years following the first survey. The surveys will determine the level of use of habitats at the Site by bird species and the effectiveness of mitigation and enhancement for bird species. The surveys will inform ongoing management with advice from the ecologist used to amend (as necessary) management of habitats and ecological features to support bird species, in particular marsh harriers, skylarks, and willow tits.
- 7.7 Results of monitoring will be submitted as a report to the LPA on the 1st of November of each year in which monitoring occurs. The report will provide an assessment of the condition of all habitats and linear features and faunal features/mitigation provided/or enhanced. The report will detail proposals for adaptive management.
- 7.8 The reports should be reviewed by those members of staff involved in ongoing Site management and who are suitably qualified, to inform changes to the management plan. Management prescriptions and the work programme should be amended as necessary, by a suitable qualified person, to ensure the landscaping and associated habitats establish and maintain the aims and objectives of this management plan.
- 7.9 Should the need arise, FPCR Environment and Design Ltd, or another consultant ecologist, should be contacted for advice.

TABLE 1: LANDSCAPE AND ECOLOGICAL OBJECTIVES

Feature	Landscape and Ecological Objective	Indicative Target Condition under BNG Metric	Habitat Management Criteria	Monitoring Regime and Indicators that Objective has been achieved
Individual trees	A healthy and native tree resource is being maintained that provides potential suitability for wildlife including foraging and commuting bats and foraging and nesting birds. The habitat also meets the BNG metric target condition.	Moderate	<p>To achieve the target condition, management prescriptions should meet the following criteria:</p> <ul style="list-style-type: none"> • Trees to be planted avoiding areas where restricted root growth, excessive disturbance etc may be an issue. • Only native tree species in planting scheme. • Area beneath trees maintained as vegetation (not paved/gravelled over). • Pruning regime to be limited to that required to maintain tree health, with exception of public health and safety requirements. • Avoid herbicide use in close proximity to trees (<1m). • Replace any failed specimens. 	<p><u>Monitoring Regime</u> - every year</p> <p><u>Indicators that the Objective is being achieved:</u></p> <ul style="list-style-type: none"> • Trees are healthy. <p><u>Remedial actions</u></p> <ul style="list-style-type: none"> • Trees are not healthy – remove diseased/dead wood – arisings to be removed from site. • Dead tree – replace with an appropriate native species.
Native hedgerows	A healthy native species hedgerow resource is to be maintained and created that provides screening to the development and potential suitability for foraging and commuting bats and foraging and nesting birds. The habitat also meets the BNG metric target condition.	Good	<p>To achieve the target condition, management prescriptions should meet the following criteria:</p> <ul style="list-style-type: none"> • New planting will utilise native species. • The borders of the hedges in less formal areas will be subject to relaxed management to encourage a diverse interface between habitats. • Treatment to remove any invasive non-native species should they arise. • Replacement planting to compensate for failed specimens during establishment period. • Hedge width allowed to reach 1.5m wide. • Canopy height allowed to reach and be maintained above 1.5m. • Grassland buffer allowed to establish with the exception of the hedgerow adjacent to the woodland edge planting. • Cutting should be done in an 'A' profile to promote a healthy base. 	<p><u>Monitoring Regime:</u> Every two years in the first five years. Every five years after that.</p> <p><u>Indicators that the Objective is being achieved:</u></p> <ul style="list-style-type: none"> • The hedgerow contains only native woody species. • There is a rich variety of herbaceous plants at its base. • The hedgerow has an A shape profile (after year 4) and has reached a height of 1.5m. • The hedgerow is not too short and gappy nor is developing into a line of trees. <p><u>Remedial actions:</u></p> <ul style="list-style-type: none"> • Ensure hedgerow has only native woody species– replace plants as necessary to achieve this. • Ensure that there is a rich variety of herbaceous plants at its base by leaving an uncut buffer of 1m within the conservation grassland adjacent to it. • Ensure that the hedgerow has an A shape profile – review trimming techniques if it has not been achieved. • Not too short, gappy or developing into a line of trees - ensure that the hedgerow management cycle is being followed, with the hedgerow at points 4 to 7. If necessary, gaps to be filled on a 2 for 1 basis with appropriate native species.

Feature	Landscape and Ecological Objective	Indicative Target Condition under BNG Metric	Habitat Management Criteria	Monitoring Regime and Indicators that Objective has been achieved
<p>Other Woodland – Broadleaved (Retained and Created)</p>		<p>Moderate</p>	<p>To achieve the target condition, management prescriptions should meet the following criteria:</p> <ul style="list-style-type: none"> • Five or more native tree or shrub species found across woodland parcel • >80% of canopy trees and >80% of understory shrubs are native. • Two woodland storeys across all survey plots. • No excessive damage from herbivores. • Three classes of regeneration present. • Between 25% and 50% of all survey plots within the woodland parcel have deadwood, such as standing deadwood, large dead branches and or stems, stubs and stumps, or an abundance of small cavities. • No invasive species present. • 10-20% of woodland has temporary open space (glades and rides). 	<p><u>Monitoring Regime:</u> Every two years in the first five years. Every five years after that.</p> <p><u>Indicators that the Objective is being achieved:</u></p> <ul style="list-style-type: none"> • Five or more species are present in any 10m² area. • Only native species are planted. • Two or more storeys are present within the woodland. • No excessive herbivore damage present. • Three classes of regeneration present (trees 7cm diameter, saplings, seedlings). • > 25% of survey plots have deadwood. • No invasive species. • 10-20% temporary open space. <p><u>Remedial actions:</u></p> <ul style="list-style-type: none"> • Replace failed planting • Provide herbivore guards and if required fence areas to prevent herbivore damage • Plant shrubs as whips to encourage understorey growth if not naturally regenerating • Clear and treat areas of invasive species • Manage ground flora, clear areas of monoculture and undesirable species, overseed with woodland mix in clear areas. • Selectively coppice or thin on a rotational basis (after 5 years) to promote regeneration and diversity • Create new deadwood features with brash or on selected trees in established woodland. • If required thin areas of dense growth to provide glades and clearings.

Feature	Landscape and Ecological Objective	Indicative Target Condition under BNG Metric	Habitat Management Criteria	Monitoring Regime and Indicators that Objective has been achieved
Mixed scrub planting	To create a habitat with a diversity of structure to provide potential resources for wildlife. The habitat also meets the BNG metric target condition.	Moderate	<p>To achieve the target condition, management prescriptions should meet the following criteria:</p> <ul style="list-style-type: none"> • Native scrub planting of minimum 3 woody species – planted in clumps to encourage structural diversity. • Rotational cutting schedule to maintain a variety of age and structure, including clearings/ glades. • Maintenance of edge habitat between dense scrub and clearings, adjacent grassland, and access paths. • Removal of invasive non-native species. 	<p><u>Monitoring</u> Every two years in the first five years. Every five years after that.</p> <p><u>Indicators that the Objective is being achieved:</u></p> <ul style="list-style-type: none"> • Healthy plants • More than 3 native woody species within habitat with no one species comprising more than 75% of the cover • Structurally diverse with clearings/ glades • Presence of a well-developed edge habitat of mixed density • Absence of invasive non-native species <p><u>Remedial actions</u></p> <ul style="list-style-type: none"> • Plant is not healthy – remove diseased parts – replace if necessary. • The habitat benefits from being structurally diverse - employ more severe pruning where necessary. • No one species to dominate over 75% of species composition – remove and replant with alternative native species, as necessary. • Less than 4 native species – ensure that this area is being developed over a period of time on a rolling removal regime. • No edge habitat – cut scrub edge more often and limit mowing on adjacent grassland • Presence of non-native invasive species – remove
Modified (Amenity) grassland	Provides visually pleasing green infrastructure for the development allowing for visibility on roadways. The habitat also meets the BNG metric target condition.	Moderate	<p>To achieve the target condition, management prescriptions should meet the following criteria:</p> <ul style="list-style-type: none"> • Use a hardwearing lawn/amenity grassland mixture containing at least 6 species • Treatment to remove any invasive non-native species should they arise. • Reseeding any areas of failed establishment. • Leaving less formal / periphery areas / areas bordering scrub un-mown during the summer months (May-Early August) where appropriate. • Keeping bracken and scrub cover below 20% - mowing often to maintain as an amenity area should prevent them establishing. 	<p><u>Monitoring Regime</u> Every two years in the first five years. Every five years after that.</p> <p><u>Indicators that the Objective is being achieved:</u></p> <ul style="list-style-type: none"> • Healthy grassland with limited unwanted plants, invasive non-native species, and scrub. • Grassland contains at least 6 species per m² • Cover of bare ground is less than 5% of total area <p><u>Remedial actions</u></p> <ul style="list-style-type: none"> • Where grass is not healthy it may need resowing to maintain its visual objective. • Encroachment of unwanted species (see BNG criteria) may require a change to the management regime or targeted removal. • Less than 6 species per m² – re-sow with seed mix with at-least 6 species. • Bare ground more than 5% total area – re-sow bare ground with seed mix.

Feature	Landscape and Ecological Objective	Indicative Target Condition under BNG Metric	Habitat Management Criteria	Monitoring Regime and Indicators that Objective has been achieved
Other Neutral Grassland	To provide a biodiverse grassland, creating a food source and shelter for invertebrates and potential small mammals and amphibians. Provide an area of forage/hunting for marsh harriers. The habitat also meets the BNG metric target condition.	Moderate	<p>To achieve the target condition, management prescriptions should meet the following criteria:</p> <ul style="list-style-type: none"> • Use a general-purpose meadow seed mix to create a diverse sward (>8 species per m²). • Annual management to prevent scrub/bracken encroachment. • Treatment to remove any invasive non-native species should they arise. • Targeted weeding/treatment to limit/remove undesirable species to below 5% ground cover (creeping thistle, spear thistle, curled dock, broad-leaved dock, common nettle, greater plantain, cow parsley). • Avoid mowing from March to late-September and mow twice outside of this time (if necessary). • After the first cut, cuttings should be left for 48 hours and then removed. 	<p><u>Monitoring</u> Every two years in the first five years. Every five years after that.</p> <p><u>Indicators that the Objective is being achieved:</u> Meets the UKHab criteria for Other Neutral Grassland. Absence of non-native invasive species. Diverse sward height – at least 20% is <7cm and at least 30% is >7cm.</p> <p><u>Remedial actions</u> If grassland does not maintain its diversity, management should be reviewed, depending on what species is becoming prominent. Presence of non-native invasive species – targeted removal.</p>
Other Neutral (Wet) Grassland	To provide an area for flood retention/prevention and a biodiverse grassland suitable for seasonally wet areas, creating a tussocky habitat suitable for wildlife and promote forage/hunting by marsh harriers. The habitat also meets the BNG metric target condition.	Moderate	<p>To achieve the target condition, management prescriptions should meet the following criteria:</p> <ul style="list-style-type: none"> • Create areas with scrapes and undulations allowing shallow ephemeral pools and ponds of water to form. • Use an appropriate wet meadow seed mix to create a diverse sward. • Use an appropriate tussock grassland mix on the periphery to create a transitional zone with added diversity and structure. • Annual management to prevent scrub/bracken encroachment spreading throughout the area. • Treatment to remove any invasive non-native species should they arise. • Targeted weeding/treatment to limit/remove undesirable species to below 5% ground cover (creeping thistle, spear thistle, curled dock, broad-leaved dock, common nettle, greater plantain, cow parsley). • Avoid mowing from March to August and mow twice outside of this time. • After the first cut in August, cuttings should be left for 48 hours and then removed. 	<p><u>Monitoring</u> Every two years in the first five years. Every five years after that.</p> <p><u>Indicators that the Objective is being achieved:</u> Meets the UKHab criteria for Other Neutral Grassland. Absence of non-native invasive species. Diverse sward height – at least 20% is <7cm and at least 30% is >7cm.</p> <p><u>Remedial actions</u> If grassland does not maintain its diversity, management should be reviewed, depending on what species is becoming prominent. Presence of non-native invasive species – targeted removal.</p>
Attenuation Ponds (non-priority) and Marginal Planting	To provide sustainable Site drainage and a biodiverse habitat suitable for wildlife. The habitat also meets the BNG metric target condition.	Moderate	<p>To achieve the target condition, management prescriptions should meet the following criteria:</p> <ul style="list-style-type: none"> • Annual management to limit pond shading to below 50% by any woody bankside species that may encroach. • Treatment to remove any invasive non-native species should they arise. • Management to reduce nutrient load to be undertaken should filamentous algae/duckweed become dominant. • No fish to be stocked. • The pond will be engineered to remain permanently wet. 	<p><u>Monitoring Regime</u> Every two years in the first five years. Every five years after that.</p> <p><u>Indicators that the Objective is being achieved:</u></p> <ul style="list-style-type: none"> • Marginal, submerged, and emergent vegetation should not exceed 50% of the pond area. • Pond shading by bank vegetation does not exceed 50%. • Pond is not silted up and remains wet throughout the year. <p><u>Remedial actions</u> If pond vegetation exceeds 50% of pond area, the pond is shaded by more than 50% by bank vegetation, or pond silted up then management prescriptions should be reviewed.</p>

Feature	Landscape and Ecological Objective	Indicative Target Condition under BNG Metric	Habitat Management Criteria	Monitoring Regime and Indicators that Objective has been achieved
Sustainable Urban Drainage Features	To provide sustainable Site drainage and a biodiverse habitat suitable for wildlife. The habitat also meets the BNG metric target condition.	Moderate	To achieve the target condition, management prescriptions should meet the following criteria: <ul style="list-style-type: none"> • New planting will utilise native species, including flowering species. • Marginal and emergent planting will be managed to provide a diversity of structure in the habitats with some tall species and areas of low growth or bare ground • No Invasive Non-Native Species will be allowed to colonize and will be treated should they arise. • The water table is kept at or near the surface throughout the year. The area should at least be damp with water saturation in the ground or open water present in the feature. 	<p><u>Monitoring Regime:</u> Every two years in the first five years. Every five years after that.</p> <p><u>Indicators that the Objective is being achieved:</u></p> <ul style="list-style-type: none"> • The marginal planting contains a diversity of native flowering species • There is a diversity in the structure of the marginal and emergent planting. • Damp conditions are present within the feature with water table near the surface. Open water may be present throughout or for some of the year. <p><u>Remedial actions:</u></p> <ul style="list-style-type: none"> • Should marginal/emergent planting fail, replace with plugs or new seeding. • Management should not allow a monoculture with one structure to arise. Marginal and emergent planting will be thinned or left to grow tall where appropriate to encourage a diverse structure. • Should the feature remain dry for most of the year the design of the feature should be reviewed (by a suitably experienced drainage engineer) and action taken to ensure that damp conditions are present.
Faunal habitat measures – log piles	To provide additional opportunities for wildlife	Not applicable	Not applicable	<p><u>Monitoring Regime</u> Every five years to ensure log pile remains viable and is in optimum location.</p> <p><u>Indicators that the Objective is being achieved:</u></p> <ul style="list-style-type: none"> • Log pile present and in good condition. Location is suitable for target species. <p><u>Remedial actions</u></p> <ul style="list-style-type: none"> • If the recommended faunal measure is not present or damaged/in poor condition, it shall be replaced. • If location is no longer considered suitable, re-build in a different location.
Faunal habitat measures – external bird boxes	To provide additional opportunities for wildlife	Not applicable	Not applicable	<p><u>Monitoring</u> Every five years to ensure bird boxes are in good condition – visual check only.</p> <p><u>Indicators that the Objective is being achieved:</u></p> <ul style="list-style-type: none"> • Bird boxes present and in good condition. Location is suitable for target species. <p><u>Remedial actions</u></p> <ul style="list-style-type: none"> • If the recommended faunal measures are not present or damaged/in poor condition, they shall be replaced. • If location is no longer considered suitable, re-install in a different location.

Feature	Landscape and Ecological Objective	Indicative Target Condition under BNG Metric	Habitat Management Criteria	Monitoring Regime and Indicators that Objective has been achieved
Faunal habitat measures – Willow tit habitat features	To encourage willow tit to use the habitats and provide additional opportunities for the species.	Not applicable	Not applicable	<p><u>Monitoring</u> After five years. Every five years afterwards</p> <p><u>Indicators that the Objective is being achieved</u></p> <ul style="list-style-type: none"> Willow tit nesting features in good condition (decaying logs still present) Willow tit observed using the Site <p><u>Remedial actions</u></p> <ul style="list-style-type: none"> Replace logs which have deteriorated beyond use Plug holes in viable logs with sawdust (if applicable) Review management prescriptions for willow tit and woodland in general.
Faunal habitat measures – external bat boxes	To provide additional opportunities for wildlife	Not applicable	Not applicable	<p><u>Monitoring</u> Every five years to ensure bat boxes are in good condition – visual check only. Bat boxes can only be opened by licensed bat workers.</p> <p><u>Indicators that the Objective is being achieved:</u></p> <ul style="list-style-type: none"> Bat boxes present and in good condition. Location is suitable for target species. <p><u>Remedial actions</u></p> <ul style="list-style-type: none"> If the recommended faunal measures are not present or damaged/in poor condition, they shall be replaced. Old bat boxes should only be removed by licensed bat workers. If location is no longer considered suitable, re-install in a different location.
Faunal habitat measures – mammal ledge and underpass	To provided continued connectivity and reduce potential for mammals to be impacted by vehicle movements	Not applicable	Not applicable	<p><u>Monitoring</u> Annually</p> <p><u>Indicators that the Objective is being achieved:</u></p> <ul style="list-style-type: none"> Paths to and from the features are clear of vegetation and other obstructions The features themselves are free of obstructions and in good condition. <p><u>Remedial actions</u></p> <ul style="list-style-type: none"> If vegetation to and from the features is extensive it should be cut back, and arisings removed from the area. And other obstructions should be removed from the area. If the feature is obstructed it should be cleared as soon as possible and any debris/silt/vegetation arisings should be removed from the area. If the feature is damaged or in poor condition it should be repaired as soon as possible.

Feature	Landscape and Ecological Objective	Indicative Target Condition under BNG Metric	Habitat Management Criteria	Monitoring Regime and Indicators that Objective has been achieved
<p>Faunal habitat measures – bird habitats</p>	<p>To provide opportunities for bird species and targeted mitigation/enhancement</p>	<p>Not applicable (includes all habitat creation areas throughout the Site)</p>	<p>Not applicable (results of monitoring will feed back into the management of specific habitats across the Site where necessary).</p>	<p><u>Monitoring</u> Bird surveys by a suitably qualified and experienced ecologist to begin in the first year of occupation of development plots. Surveys to be repeated in years 3, 5 and 10 following the first survey.</p> <p><u>Indicators that the Objective is being achieved:</u></p> <ul style="list-style-type: none"> • A range of common bird species are present and using the habitats within the Site. • Bird species targeted by mitigation are using habitats at the Site (marsh harrier, skylark). • Bird species targeted by enhancements are using habitats at the Site (common bird species and willow tit). <p><u>Remedial actions</u></p> <ul style="list-style-type: none"> • Advice from the ecologist will inform future management targeted to modify habitats or improve features to attempt to further support or attract target species.

TABLE 2: MANAGEMENT PRESCRIPTIONS & WORK PROGRAMME

FEATURE	Prescription Number	MANAGEMENT PRESCRIPTION TO ACHIEVE LANDSCAPE & ECOLOGICAL OBJECTIVE:	Year 1	Year 2	Year 3	Year 4	Year 5	Year 5+
Individual Trees	1	New trees should be planted between October and March, avoiding periods of inundation or prolonged ground frost. This will accord with BS 8545:2014 ³ . The following details will be advised at a later date: <ul style="list-style-type: none"> the planting mix (to meet BNG criteria) height, form, and root information. information about tree stakes and tree protection methods. 	✓					
	2	Examine all tree stakes and ties, replace, or adjust as appropriate. If the tree has yet to establish, replace or adjust ties, spacers, and tree tubes as appropriate. If the tree has established well, then remove all stakes, ties, spacers, tubes etc. and make good surfaces disturbed – filling any holes with suitable topsoil.	✓	✓	✓			
	3	Plants found to be dead or dying within the first five years post planting to be replaced on a like-for-like basis as soon as possible within the next available planting season. Replace failed specimens on a like-for-like basis.	✓	✓	✓	✓	✓	
	4	Where periods of extreme drought occur (2 or more weeks without substantial rainfall), trees that have not yet established (not healthy, not in full leaf, suppressed growth) need to be watered where their tolerance to drought is deemed to be insufficient (years 1 to 3).	✓	✓	✓	✓	✓	✓
	5	Inspect trees annually and after major storms. Undertake any resultant scheduled tree works outside of the bird breeding season as appropriate.				✓	✓	✓
	6	Pruning of dead, diseased, or damaged branches should be carried out as appropriate to promote healthy growth. Some dead wood could be retained on the trees to form habitat unless it creates a hazard.	✓	✓	✓	✓	✓	✓
	7	Any cutting/pruning of scattered trees should only take place during September to January, when nesting birds are likely to be absent. Cutting should not be carried out during the	✓	✓	✓	✓	✓	✓
	8	bird nesting season (March-August) unless supervised by a suitably qualified person.	✓	✓	✓	✓	✓	✓
	9	Care will be taken when using strimmers or mowers to avoid damaging trees. Weeds within 1m of the trunks will be removed by hand.	✓	✓	✓	✓	✓	✓
	10	Monitor feature (see Table 1 for monitoring criteria).	✓	✓	✓	✓	✓	✓
Native species Hedgerow (Retained and Created)	1	The hedgerow will be planted within planting season (November to March). The following details will be advised at a later date: <ul style="list-style-type: none"> the planting mix height, form, and root information. 	✓					
	2	Individual tree shelters will be required to prevent damage to saplings.	✓					
	3	Works should accord with BS 8545: 2014.	✓					
	4	Replace dead, dying and diseased plants on a one-to-one basis.	✓	✓	✓	✓	✓	
	5	Guards replaced where necessary between November and March (years 1 to 5 annually). Plant protection will be removed once the hedgerow is established.	✓	✓	✓	✓	✓	
	6	During periods of drought (2 or more weeks without substantial rainfall) the plants that have not yet established (such as unhealthy specimens, or those not in full leaf, or with suppressed growth) need to be watered where their tolerance to drought is deemed to be insufficient (years 1 to 3).	✓	✓	✓			
	7	Any cutting/pruning of the hedgerow should only take place during September to January, when nesting birds are likely to be absent. Cutting should not be carried out during the bird nesting season (March-August) unless supervised by a suitably qualified person. Ideally, if it could be left until October, hedgerow fruit, nuts and seeds would be left for wildlife to consume.	✓	✓	✓	✓	✓	✓
	8	Prune any diseased or rotten wood back to sound wood. Remove all cut material from site.	✓	✓	✓	✓	✓	✓
	9	Until establishment, formative pruning will be undertaken once annually to keep the hedgerow tidy.	✓	✓	✓	✓	✓	✓
	10	Three years after the initial planting of new hedgerows they will be assessed and beaten up as required. The need for light trimming, to continue the development of a dense hedge will be assessed.			✓			✓
	11	Side trim hedgerows in an 'A' profile to promote healthy hedgerow base. Starting in year 4 after planting, hedgerows will be cut every other year on a 50/50 rotational basis between September and January, when nesting birds are likely to be absent. This ensures that a maximum of 50% of hedgerows are cut in any one year, providing a continual provision of cover and foraging resources throughout the seasons.				✓	✓	✓
	12	In the long term, hedgerows will be taken through a Hedgerow Management Cycle (HMC). The aim should be to keep the hedge at points 4 to 7, periodically laying or coppicing it, with trimming at appropriate intervals in between. If the hedge is not permitted to go through this cycle, it will either, if cut too often, become short and gappy (steps 1 to 3) or, if neglected, develop into a line of trees (steps 8 to 10).				✓	✓	✓
	13	Monitor feature (see Table 1 for monitoring criteria).		✓		✓		✓

³ BSI Standards Publication. BS 8545:2014. Trees: from nursery to independence in the landscape – Recommendations.

FEATURE	Prescription Number	MANAGEMENT PRESCRIPTION TO ACHIEVE LANDSCAPE & ECOLOGICAL OBJECTIVE:	Year 1	Year 2	Year 3	Year 4	Year 5	Year 5+
Other Woodland – Broadleaved (Retained and Created)	1	Plant new native species in irregular clumps to allow the creation of clear rides and glades. Planting at optimal time in Oct - March. Thin/coppice existing retained woodland to create open areas (rides/glades).	✓					
	2	Replace failed trees on a like-for-like basis.	✓	✓	✓	✓	✓	
	3	Remove non-native saplings (and trees in existing woodland where appropriate)	✓		✓		✓	✓
	4	Plants to be maintained by suitable means, to prevent competition by weeds and grasses until planting has established.	✓	✓	✓	✓	✓	✓
	5	Where periods of extreme drought occur (2 or more weeks without substantial rainfall), plants that have not yet established (not healthy, not in full leaf, suppressed growth) need to be watered where their tolerance to drought is deemed to be insufficient (years 1 to 3).	✓	✓	✓			
	6	Plant shrub whips to encourage understorey development if natural development is not occurring	✓				✓	✓
	7	Established woodland to be selectively coppiced/thinned on a rotational basis after 5 years (5-year coppice cycle)	✓				✓	✓
	8	Inspect for invasive species and treat or remove	✓	✓	✓	✓	✓	✓
	9	Manage ground flora, remove undesirable species, or spot treat with herbicide (if appropriate) and remove or thin areas of monoculture (ivy, bramble etc), overseed with woodland seed mix in open areas. Annual cut of grass/vegetation in late summer	✓		✓		✓	✓
	10	Create deadwood features where appropriate	✓		✓		✓	✓
	11	Check for damage from herbivores and install protection measures if required	✓	✓	✓	✓	✓	✓
	12	Monitor feature (see Table 1 for monitoring criteria).	✓	✓	✓	✓	✓	✓
Mixed Scrub	1	Plant in clumps with native woody scrub species.	✓					
	2	Replace failed plants on a like-for-like basis.	✓	✓	✓	✓	✓	
	3	Plants to be maintained by suitable means, to prevent competition by weeds and grasses until planting has established.	✓	✓	✓	✓	✓	✓
	4	Where periods of extreme drought occur (2 or more weeks without substantial rainfall), plants that have not yet established (not healthy, not in full leaf, suppressed growth) need to be watered where their tolerance to drought is deemed to be insufficient (years 1 to 3).	✓	✓	✓			
	5	Once established, any necessary pruning (see rotational schedule) should only take place during September to January, when nesting birds are likely to be absent, ideally cut during winter months, following fruiting during frost free periods. Cutting should not be carried out during the bird nesting season (March-August) unless supervised by a suitably qualified person.	✓	✓	✓	✓	✓	✓
	6	To maintain structural diversity, no more than 10% of suitable plants should be coppiced/removed when necessary. Control undesirable species for this type of habitat including nettles <i>Urtica spp.</i> , cleavers <i>Galium aparine</i> , docks <i>Rumex spp.</i> , buddleia <i>Buddleja spp.</i> , cotoneaster <i>Cotoneaster spp.</i> , when cover exceeds 5% by cutting or herbicides, as necessary. (1st April – 30th September as required).	✓	✓	✓	✓	✓	✓
	7	Remove any invasive non-native species by cutting or spot treating with herbicides, as necessary.	✓	✓	✓	✓	✓	✓
	8	The scalloped edge habitat of the structural planting should be maintained.	✓	✓	✓	✓	✓	✓
	9	Monitor feature (see Table 1 for monitoring criteria).	✓	✓		✓		✓
Modified (Amenity) Grassland – Close mown	1	Seed will be sown in the autumn or spring, selecting a time when the soil is moist and can be worked.	✓					
	2	Areas to be sown will be first rotovated and raked or harrowed to produce a medium fine, firm tilth to a depth of 150mm. Weeds to be removed through cultivation.	✓					
	3	See landscape plan for recommended seed mix. Seed mix to be sown at a density as per the general manufacturer's recommendation (typically 5 - 10g/sqm).	✓					
	4	Newly seeded areas will be protected to prevent seedling destruction by pedestrians.	✓					
	5	During initial establishment of new grassland, mow regularly (every 7 -10 days during growing season) throughout the first year of establishment. Cut to a height of 40-60mm. Dig out any residual perennial weeds such as broad-leaved dock. Water as necessary during establishment.	✓					
	6	Once established, mow regularly as a lawn but allowing a little length (25-40mm). Care to be taken when using strimmers or mowers to avoid damaging any trees. Weeds and grass within 100mm of the trunks will be removed by hand.		✓	✓	✓	✓	✓
	7	Remove all arisings from site immediately.	✓	✓	✓	✓	✓	✓
	8	Spot treat pernicious weeds using herbicide following the first season's growth and/ manual hand strimming of target areas either in late summer when adjacent grassland is mown or in early spring. Care will be taken when using herbicide adjacent to riparian and aquatic habitats to prevent pollution of such habitats.	✓	✓	✓	✓	✓	✓
	9	Re-sow any worn grass areas (using an appropriate grass seed mix) as required to maintain a dense sward of grass and undertake weed control (using a suitable approved herbicide) as required.	✓	✓	✓	✓	✓	✓
	10	All litter, stones or other debris will be collected and removed by the Contractor immediately prior to grass cutting operations.	✓	✓	✓	✓	✓	✓
	11	Monitor feature (see Table 1 for monitoring criteria).	✓	✓		✓		✓


FEATURE	Prescription Number	MANAGEMENT PRESCRIPTION TO ACHIEVE LANDSCAPE & ECOLOGICAL OBJECTIVE:	Year 1	Year 2	Year 3	Year 4	Year 5	Year 5+
Other Neutral Grassland - Wildflower Grassland	1	Seed will be sown in the autumn or spring, selecting a time when the soil is moist and can be worked.	✓					
	2	Areas to be sown will first be rotavated and raked or harrowed to produce a medium fine, firm tilth to a depth of 150 mm. Weeds to be removed through cultivation.	✓					
	3	Fertiliser will not be applied at any point as this will lead to dominance of nutrient loving species such as broadleaved grasses, nettles, and docks.	✓	✓	✓	✓	✓	✓
	4	Seeding will be sown by hand broadcasting or machine on the surface and will not be raked or harrowed in.	✓					
	5	Seed mix to be sown at a density as per the general manufacturer's recommendation (typically 5 - 10g/sqm).	✓					
	6	The seed mix is likely to contain mostly perennial species which are likely to be slow to germinate and grow and will not usually flower in the first growing season. The initial flush of annual weeds from the soil will thus be controlled by topping or mowing. Pernicious weeds may be spot treated only as necessary.	✓	✓				
	7	Newly seeded areas will be protected where necessary to prevent damage.	✓					
	8	During initial establishment, when the grassland reaches 200mm in height, the sward should be mown to a height of typically 75mm to reduce the number of coarse grasses and pernicious weeds.	✓	✓				
	9	In subsequent years and subject to the particular mix, grassland should be cut twice annually in early spring and late summer to no lower than 75mm in height. An uncut margin up to 1m wide at the edge of any adjoining hedgerows or trees would provide habitat diversity and shelter of interest to a range of other local fauna including invertebrates, butterflies, and small mammals, cut rotationally.			✓	✓	✓	✓
	10	To control scrub and bramble development, encroaching growth may need cutting every 2-3 years between October and February.		✓		✓		✓
	11	Spot treat or remove by hand undesirable species (creeping thistle <i>Cirsium arvense</i> , spear thistle <i>Cirsium vulgare</i> , curled dock <i>Rumex crispus</i> , broad-leaved dock <i>Rumex obtusifolius</i> , common nettle <i>Urtica dioica</i> , greater plantain <i>Plantago major</i> , cow parsley <i>Anthriscus sylvestris</i>) and invasive non-native species following the first season's growth.	✓	✓	✓	✓	✓	✓
	12	Avoid using herbicide adjacent to riparian and aquatic habitats to prevent pollution of such habitats.	✓	✓	✓	✓	✓	✓
	13	Arising will be left for 48 hours to allow dispersal of seeds and invertebrates. To prevent soil enrichment and thatching, arisings should be removed from the site no more than 72 hours after cutting.	✓	✓	✓	✓	✓	✓
	14	Re-sow any worn grass areas (using an appropriate grass seed mix) as required to maintain a dense sward of grass and undertake weed control (using a suitable approved herbicide) as required.		✓	✓	✓	✓	✓
	15	All litter, stones or other debris will be collected and removed by the Contractor immediately prior to grass cutting operations. Care shall be exercised when mowing or strimming around trees and hedges or other structures.	✓	✓	✓	✓	✓	✓
	16	Monitor feature (see Table 1 for monitoring criteria).		✓		✓		✓

FEATURE	Prescription Number	MANAGEMENT PRESCRIPTION TO ACHIEVE LANDSCAPE & ECOLOGICAL OBJECTIVE:	Year 1	Year 2	Year 3	Year 4	Year 5	Year 5+
Other Neutral Wet Grassland		Management is much the same as the general purpose and wildflower meadows but mowing and management cannot be carried out when water levels are high, and mowing should also be avoided in February (as well as March to August) to avoid amphibian breeding season. Scrapes to be created prior to seeding;						
	1	Seed will be sown in the autumn or spring, selecting a time when the soil is moist and can be worked.	✓					
	2	Areas to be sown will first be rotavated and raked or harrowed to produce a medium fine, firm tilth to a depth of 150 mm. Weeds to be removed through cultivation.	✓					
	3	Fertiliser will not be applied at any point as this will lead to dominance of nutrient loving species such as broadleaved grasses, nettles, and docks.	✓	✓	✓	✓	✓	✓
	4	Seeding will be sown by hand broadcasting or machine on the surface and will not be raked or harrowed in.	✓					
	5	Seed mix to be sown at a density as per the general manufacturer's recommendation (typically 5 - 10g/sqm).	✓					
	6	The seed mix is likely to contain mostly perennial species which are likely to be slow to germinate and grow and will not usually flower in the first growing season. The initial flush of annual weeds from the soil will thus be controlled by topping or mowing. Pernicious weeds may be spot treated only as necessary.	✓	✓				
	7	Newly seeded areas will be protected where necessary to prevent damage.	✓					
	8	During initial establishment, when the grassland reaches 200mm in height, the sward should be mown to a height of typically 75mm to reduce the number of coarse grasses and pernicious weeds.	✓	✓				
	9	In subsequent years and subject to the particular mix, grassland should be cut twice annually in early spring and late summer to no lower than 75mm in height. An uncut margin up to 1m wide at the edge of any adjoining hedgerows or trees would provide habitat diversity and shelter of interest to a range of other local fauna including invertebrates, butterflies, and small mammals, cut rotationally.			✓	✓	✓	✓
	10	To control scrub and bramble development, encroaching growth may need cutting every 2-3 years between October and February.		✓		✓		✓
	11	Spot treat or remove by hand undesirable species (creeping thistle <i>Cirsium arvense</i> , spear thistle <i>Cirsium vulgare</i> , curled dock <i>Rumex crispus</i> , broad-leaved dock <i>Rumex obtusifolius</i> , common nettle <i>Urtica dioica</i> , greater plantain <i>Plantago major</i> , cow parsley <i>Anthriscus sylvestris</i>) and invasive non-native species following the first season's growth.	✓	✓	✓	✓	✓	✓
	12	Avoid using herbicide adjacent to riparian and aquatic habitats to prevent pollution of such habitats.	✓	✓	✓	✓	✓	✓
	13	Arisings will be left for 48 hours to allow dispersal of seeds and invertebrates. To prevent soil enrichment and thatching, arisings should be removed from the site no more than 72 hours after cutting.	✓	✓	✓	✓	✓	✓
	14	Re-sow any worn grass areas (using an appropriate grass seed mix) as required to maintain a dense sward of grass and undertake weed control (using a suitable approved herbicide) as required.		✓	✓	✓	✓	✓
	15	All litter, stones or other debris will be collected and removed by the Contractor immediately prior to grass cutting operations. Care shall be exercised when mowing or strimming around trees and hedges or other structures.	✓	✓	✓	✓	✓	✓
16	Monitor feature (see Table 1 for monitoring criteria).		✓		✓		✓	
Aquatic planting and pond management (Ponds and SUDS)	1	Planting of aquatic plants will take place during the recommended period.	✓					
	2	All plants to be firmly heeled in to prevent plants being dislodged/floating away.	✓					
	3	When cutting/pulling of vegetation is required to maintain 50% of open water, it should be undertaken during the autumn/winter months, outside of the amphibian breeding season (undertaken between August and January).	✓	✓	✓	✓	✓	✓
	4	The vegetation will be removed by hand. Machines and heavy equipment should not be used to avoid damage to soil and vegetation.	✓	✓	✓	✓	✓	✓
	5	All removed vegetation should be left by the ponds edge for 48 hours to allow any trapped animals to escape. The arisings would then be removed from site.	✓	✓	✓	✓	✓	✓
	6	Leaf litter should be cleared during Autumn/Winter.	✓	✓	✓	✓	✓	✓
	7	Silt build-up within the pond should be monitored. These checks should be undertaken in Autumn and where necessary, de-silting techniques should only be undertaken during Autumn and Winter.	✓	✓	✓	✓	✓	✓
	8	Management to reduce nutrient load to be undertaken should filamentous algae/duckweed become dominant.	✓	✓	✓	✓	✓	✓
	9	Monitor feature (see Table 1 for monitoring criteria).		✓		✓		✓

FEATURE	Prescription Number	MANAGEMENT PRESCRIPTION TO ACHIEVE LANDSCAPE & ECOLOGICAL OBJECTIVE:	Year 1	Year 2	Year 3	Year 4	Year 5	Year 5+
Faunal habitat measures – log piles	1	Log piles will ideally be created from tree work arisings on site and placed at the interface between woodland and grassland habitats, avoiding full sun and north facing areas. Full sun will dry and heat the wood, supporting little life, whereas dense shade will promote the growth of fungi but may be too cool for insects.	✓					
	2	An area of approximately 1x3m should be selected to house a log pile in one of the mixed scrub areas and in proximity to a new pond.	✓					
	3	Larger diameter logs (at least 100mm thick) with bark are of most value, particularly hardwood like ash, oak and beech, whereas freshly cut willow and poplar may re-sprout. Twigs, stems and shrub off-cuttings may also be added. Climbers may be allowed to grow thinly over the dead wood pile for stabilisation and moisture.	✓					
	4	Larger logs and root balls initially provide structure, followed by the remaining materials. The pile will be created with a diverse structure containing a mixture of sizes and shapes of wood species, with some small-diameter material present. The wood pile should reach at least 0.5 m high.	✓					
	5	Stakes should be driven into the ground either side of the log pile to prevent the pile from collapsing. It may also be necessary to secure them using sturdy wire to discourage the dispersal of logs by animals.	✓					
	6	Log pile to be visually inspected once per year to ensure it is intact.	✓	✓	✓	✓	✓	✓
	7	Monitor feature (see Table 1 for monitoring criteria).						✓
Faunal habitat measures – external bird boxes	1	The boxes must be installed by / under the supervision of an experienced ecologist to ensure they are installed in optimum locations.	✓					
	2	The boxes should be fitted following manufacturer's instructions and the guidelines below: <ul style="list-style-type: none"> Positioned at around 3m from the ground; Not obscured by foliage so that the flight path into the box is clear; Sheltered from strong winds, rain, and strong sunlight; Exposed to the sun for part of the day (usually south, south-east or south-west); 	✓					
	3	Boxes should be visually inspected once per year to ensure that boxes are in good condition and cleaned if required	✓	✓	✓	✓	✓	✓
	4	Monitor feature (see Table 1 for monitoring criteria).					✓	✓
Faunal habitat measures – Willow Tit Habitat Features		Woodland structure in areas along Carr Dike will be managed and monitored as per the Other Woodland – Broadleaved prescriptions above, this will look to create a diverse structure within the woodland suitable for willow tit. Additional features to be managed/monitored below;						
	1	Deadwood from birch or willow 10-20cm in diameter attached to existing trees with wire and staples at 1.5m from ground level. Additional features added over time on suitable trees or on posts if no suitable trees available.	✓				✓	✓
	2	Inspect annually and replace deadwood if completely decayed and unusable features.	✓	✓	✓	✓	✓	✓
	3	Monitor feature (see Table 1 for monitoring criteria).					✓	✓

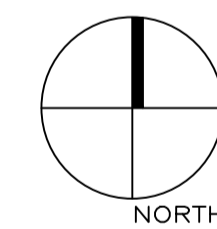
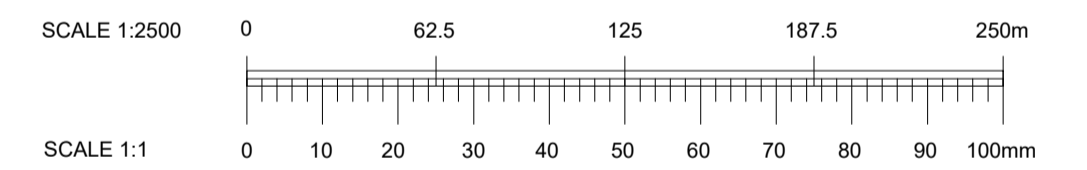
FEATURE	Prescription Number	MANAGEMENT PRESCRIPTION TO ACHIEVE LANDSCAPE & ECOLOGICAL OBJECTIVE:	Year 1	Year 2	Year 3	Year 4	Year 5	Year 5+
Faunal habitat measures – external bat boxes	1	The boxes must be installed by / under the supervision of an experienced ecologist to ensure they are installed in optimum locations. Once installed they must only be opened, moved, or disturbed by a bat worker holding the correct class of licence to ensure there is no breach of legislation. They should not be disturbed by works or any artificial lighting as part of the construction or built development.	✓					
	2	The boxes should be fitted following manufacturer's instructions and the guidelines below: <ul style="list-style-type: none"> • Positioned a minimum of 4m from the ground; • Not obscured by foliage so that the flight path into the box is clear; • Sheltered from strong winds, rain, and strong sunlight; • Exposed to the sun for part of the day (usually south, south-east or south-west); • They should not be disturbed by works or any artificial lighting as part of the construction or built development 	✓					
	3	Boxes should be visually inspected once per year to ensure that the best practice guidelines above are still being adhered to. However, once installed boxes must only be opened, moved, or disturbed by a bat worker holding the correct class of licence to ensure there is no breach of legislation.	✓	✓	✓	✓	✓	✓
	4	Monitor feature (see Table 1 for monitoring criteria).					✓	✓
Faunal habitat measures – mammal ledge and underpass	1	Ensure the area leading to and from the features are clear of obstructing vegetation or other debris. Any obstructions removed from the area.	✓	✓	✓	✓	✓	✓
	2	Ensure the features themselves are not blocked or obstructed. Remove any obstructions (debris, silt/sediment, vegetation).	✓	✓	✓	✓	✓	✓
	3	Ensure the features are in good condition and fit for purpose. If damaged commission repairs.	✓	✓	✓	✓	✓	✓
	4	Monitor feature (see Table 1 for monitoring criteria).	✓	✓	✓	✓	✓	✓
Faunal habitat measures – bird habitats	1	Monitor features beginning in first year of development plot occupancy and then 3, 5, and 10 years following initial survey (see Table 1 for monitoring criteria)	✓		✓		✓	✓



- KEY**
-  EXISTING VEGETATION
 -  CARR DYKE
 -  PROPOSED TREES
 -  PROPOSED SHRUB PLANTING
 -  PROPOSED WOODLAND MIX PLANTING
 -  PROPOSED THICKET MIX PLANTING
 -  PROPOSED INDIGENOUS HEDGEROW
 -  PROPOSED CLOSE MOWN GRASS
 -  PROPOSED WILDFLOWER GRASS
 -  PROPOSED WET WILDFLOWER GRASSLAND
 -  EXISTING GRASSLAND ALONG CARR DYKE RETAINED AND ENHANCED
 -  SAFEGUARDED LAND
 -  PLANNING APPLICATION BOUNDARY
 -  PLOT BOUNDARY

Note:

- For the avoidance of doubt, the information shown within the development plots is indicative only, and will be subject to subsequent Reserved Matters Applications.
- This drawing is to be read in conjunction with BCA Landscape Species Schedule and Proposed Landscape Plans (drawings 01, 03, 04, 05, 06, 07, 08 and 09)



P11. Amendment following team comments.	01/08/2024	MGO
P10. Amended in accordance with Hydrology & LMC plans.	30/07/2024	MGO
P9. Addition of landscape maintenance compound.	18/06/2024	MGO
P8. Amendments as requested by FPCR.	20/05/2024	MGO
P7. Amendments to RSPB's comments.	27/03/2024	MGO
P6. Safeguarded land added.	23/11/2023	MG
P5. Addition of key and notes.	20/11/2023	MGO
P4. Layout amends to Yorkshire Water requirements.	16/08/2023	MGO
P3. Additional tree planting adj. roundabout to JHP request.	04/05/2023	MG
P2. Amendment to accommodate diverted HV and Water Main.	21/04/2023	MGO
P1. Issued for planning purposes.	09/03/2023	MGO

Barnsley Road
Goldthorpe



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Landscape Location Plan

Drawing Status: For Planning
CAD Reference: 2267-22_Soft-Lscp-Plans+Sects.dwg
Drawn: MGO Checked: MG
Date: 09/03/2023
Scale @A1: 1:2500

Project No: 2267/22 Drawing No: GDT-BCA-ELS-XX-DR-L-2267/22-02-S4-P11 Rev: 1

APPENDIX 3 - FLOOD MITIGATION MAINTENANCE STRATEGY

Technical design note

Project name	Goldthorpe		
Design note title	Flood Mitigation System - proposed maintenance		
Document reference	23451-HYD-XX-XX-RP-D-0005		
Author	Neil Byrne		
Revision	P01		
Date	20 January 2025	Approved	<input type="checkbox"/>

1. Introduction

This Technical Note has been produced in response to comments and requests for additional information made by the Environment Agency (EA) in relation to the outline planning application located off Barnsley Road, Goldthorpe (ref: 2023/1105).

2. Background

A letter from the EA to Barnsley MBC was sent on 8th January (reference: RA/2023/146635/04-LO1) stating that "the FRA fails to provide adequate/acceptable compensatory flood storage" in relation to planning application 2023/1105. A subsequent meeting was held on 17th January 2025 to discuss the above and seek to provide further information to justify the proposed flood alleviation design.

There were broadly 3 aspects to the EA objection -

- a) the designation of 'flood compensation' within an area shown as Flood Zone 3
- b) risk of blockages to the proposed culverts and maintenance surety
- c) further assessment needs on flow rates and timings

This note seeks to clarify point b) by giving further detail on the maintenance requirements proposed for the flood alleviation measures proposed. Points a) and c) will be addressed separately.

3. Maintenance Commitments - Surface Water drainage

The following commitments were made in Drainage Management Strategy report (ref: 23451-HYD-XX-XX-RP-D-0003) for all surface water drainage and flood mitigation features within the proposed development

(extract from 23451-HYD-XX-XX-RP-D-0003 follows)

1.1 Management, Maintenance and Residual Risk

- 1.1.1 The proposed drainage layout will be designed in accordance with building regulations, Design and construction guidance, and Ciria C753 for SuDS structures.
- 1.1.2 Run-off from roofs is considered to be generally clean with limited contamination, and will be discharged directly to the proposed drainage infrastructure and new SuDS Facilities. Silt is to be prevented from entering the drainage system by the use of trapped gullies, interceptors or by the use of sustainable drainage techniques.
- 1.1.3 Run-off from car park and loading areas will be treated via proprietary treatment system of a full-retention oil interceptor.

1.1.4 A private management company will maintain the drainage infrastructure as part of a site-wide management and maintenance schedule as shown in Table 5 below.

Item	Maintenance	Frequency per year
Gullies	Removal of silt accumulation from mud bucket. Gratings checked for operation/damage – replaced if required.	2
Surface Water Manholes, Flow Controls	As Above. All catch pits/Vortex Separators to have silt/solid accumulation removed & base jetted clean.	1
Drainage Channels/Kerb Drains	All catch/access pits to have silt/solid accumulation removed. Channel run to be jetted through between access points. Any channel grates to be inspected for damage & replaced as necessary.	2
Ponds	Remove litter and debris, Cut Grass – for access routes and around basin, manage other vegetation and nuisance plants. Inspect inlets and outlets for blockages – clear if required. Inspect banksides, structures, pipework for evidence of physical damage. Inspect inlets and facility surface for silt accumulation.	12
Cascading Ponds	As Above.	12

Table 1: Drainage Maintenance (note: foul drainage omitted as not relevant)

Note that the above SuDS do not form part of the Flood Mitigation System but will be maintained by the same organisation. Timing of activities will depend on weather conditions, eg 12 activities will not necessarily be one per month.

4. Maintenance Commitments - Flood Mitigation System

The following maintenance of the Flood Mitigation System will be carried out as a minimum:

Item	Maintenance	Frequency per year
Flood Basins	Inspect. Remove litter and debris, Cut Grass – for access routes and around basin, manage other vegetation and nuisance plants. Inspect banksides for evidence of physical damage.	12
Trash Screens	Inspect. Regularly remove litter and debris by mechanical raking.	12
Headwalls	Inspect for silt accumulation. Silt to be periodically removed, trigger value to be once silt exceeds 10% of inlet capacity. Any damage to headwalls or railings to be repaired.	12
Culverts	CCTV survey of culverts <1.2m diameter. Internal visual inspection of larger culverts.	1

Remove silt (with suitable sediment management system, to capture and remove from site).

Rectify any defects with pipe lining techniques as Sewer Rehabilitation Manual (eg CIPP liner) or other suitable repair techniques, dependent on the type of defect

All maintenance shall be planned and carried out in accordance with CIRIA C786 Culvert, Screen and Outfall Manual. Pipe inspection and repairs shall be in accordance with the Sewer Rehabilitation Manual.

5. Further Design Considerations

The design of the Flood Mitigation System as a bypass, rather than off-line flood storage, allows for floodwater to pass through the system, which will be less prone to siltation than an off-line system.

The quadruple 900mm piped culvert beneath the new road is proposed to be fitted with trash screens at both ends. The 1800mm piped culvert linking the flood conveyance route to the flood storage basin and the 900mm diameter outlet pipe from the flood storage basin are not designed with screens. The rationale behind this is to minimise the risk of a blockage, as if one of the quadruple pipes becomes blocked the other three will be available. Access will be restricted to headwalls which are not fitted with screens and warning signs will be installed. Culvert blockage modelling has been carried out and is reported in 23451-HYD-XX-XX-TN-WENV-0002 'Response to EA Comments'.

6. Management company

As with the surface water drainage strategy, the dedicated management company will be responsible for the long-term maintenance of the flood mitigation system and will carry out this role in perpetuity, following completion of the construction works and associated contractor maintenance period.

Management Company (ManCo) will be set up to run the wider maintenance for the Site. This maintenance will be secured via suitably worded planning conditions/obligations. Therefore, if they are not complied with the local planning authority can step in and ensure compliance.

The occupiers of the future buildings will pay a service charge to facilitate the maintenance. Of note:

The ManCo will be a registered company and will utilise existing contractors to undertake the agreed work (as agreed via the planning permission conditions/obligations) in line with requirements. If the contractors for the ManCo are unable to fulfil the requirements (secured via the planning permission) then there will be provision to ensure suitable replacement is found.

As set out above this will be paid for via the service charge.

In the extremely unlikely event that all buildings are vacated at the same time then the landlord (who will ultimately own the asset) will step in and ensure continuity.