

THE LICHFIELD MODEL

Lichfield District Council Ecology Team



Embedding: No Net Loss, Mandatory Net-Gain &
Quantitative Assessment within the Planning System

THE LICHFIELD DISTRICT





Situated in the heart of the midlands in the county of Staffordshire and covers some 33,125 ha of land.

THE TWO GREATEST THREATS TO BIODIVERSITY:

- Permanent loss of habitat caused by new development
- Intensification of agricultural practices



LICHFIELD'S DEVELOPMENT PRESSURES



- Housing growth 2008-2029
- 10,080 + Windfall
- New Employment 2008-2029
 - 89.1ha
- HS2, phase 1 & phase 2a

BIODIVERSITY



WHAT LPA'S NEED TO CONSIDER



LEGISLATION & POLICY CONTEXT

- Natural Environment And Rural Communities Act 2006
- The Conservation (Natural Habitats etc.) Regulations 1994 (as amended 2017)
- The Wildlife and Countryside Act 1981 (as amended 2010)
- The Protection of Badgers Act 1992
- The Countryside and Rights of Way Act 2000
- The National Planning Policy Framework (NPPF) 2019
- Governments Biodiversity 2020: A Strategy for England's Wildlife and Ecosystem Services





THE LICHFIELD MODEL

Reducing Ecological Jargon

Created in 2015: Based on Existing Legislation and Planning Policy within the Lichfield Local Plan and Supported by an Established Evidence Base

CONSISTS OF 4 THINGS:

1

The Lichfield
Biodiversity and
Development SPD



2

One key policy
(NR3) and a
number of
supporting policies



**PLANNING
CONDITIONS**

3

Adoption of a
Habitat Creation
Opportunity Map

- Provides a concise step-by-step approach to dealing with ecology in the planning system
- All impacts and net-gains must be measurable
- Biodiversity Offsetting being the final step, only to be entered into after all other options have been explored and exhausted

4

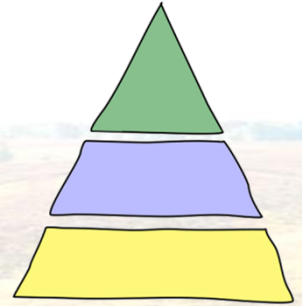
Standardised and
Enforceable
Ecological Planning
Conditions

- Securing all biodiversity net-gains and ecological monitoring for a period of no less than 25 years

POLICY NR3:

Biodiversity, Protected Species & their Habitats

- Enshrined Ecological Mitigation Hierarchy within the Lichfield planning system
- Makes the Delivery of Net-Gains to Biodiversity Value Mandatory for all developments within the Lichfield District.
- Requires that all impacts to Biodiversity caused through development (Net-Gains and Net-Losses) are Measurable.
- i.e. That developers use a 'biodiversity metric'



OTHER POLICIES IN ADDITION TO NR3

- Nature conservation is regarded as a key test of sustainable development.
- The Lichfield Local Plan addresses this duty by the inclusion of a number of other nature conservation policies in local planning documents.

These include:

- Core Policy 13: Our Natural Resources
- Policy NR4: Trees, Woodland & Hedgerow
- Policy NR5: Natural and Historic Landscapes
- Policy NR6: Linked Habitat Corridors & Multi-functional Green Spaces
- Policy NR7: Cannock Chase Special Area of Conservation
- Policy NR8: River Mease Special Area of Conservation










Lichfield District Biodiversity Opportunity Map

**Lichfield
district council**
www.lichfielddc.gov.uk
District Council House
Frog Lane
Lichfield
Staffs
WS13 6YY

Telephone: 01543 308000
enquiries@lichfielddc.gov.uk

Type of Zone

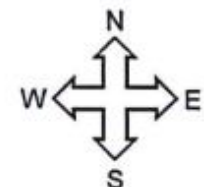
-  Acidic Woodland
-  Farmland
-  Lowland Heath
-  Lowland Meadow
-  River Corridors
-  Woodland
-  District Boundary

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Drawing No:

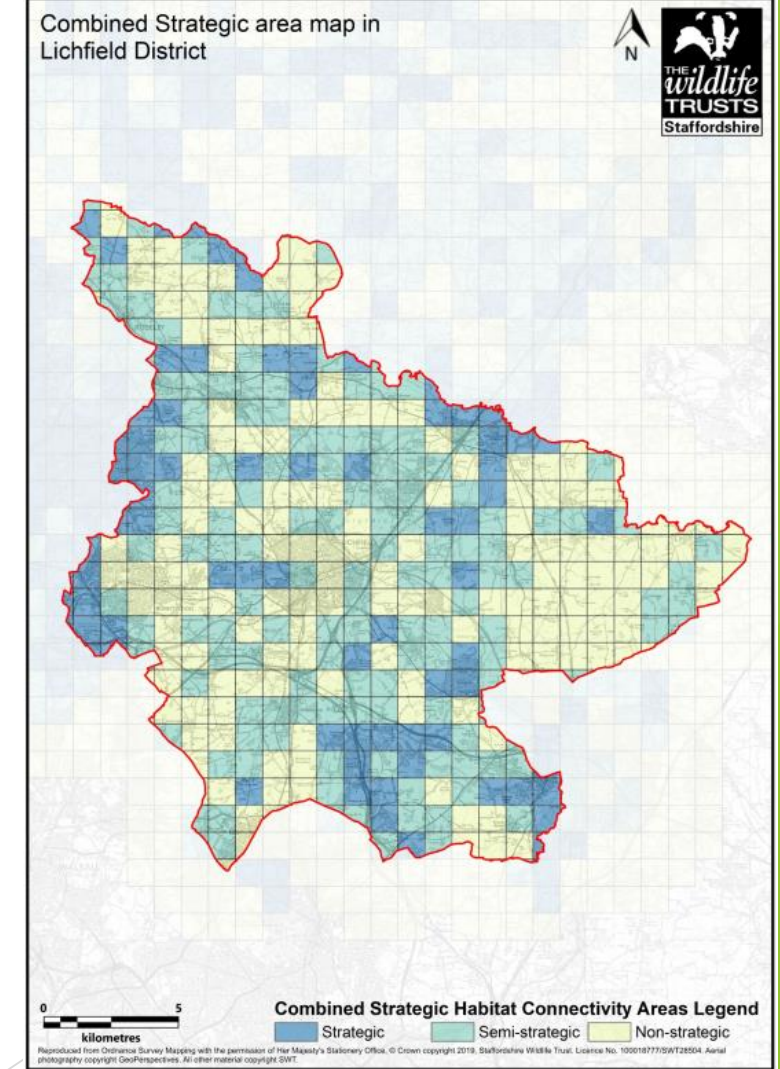
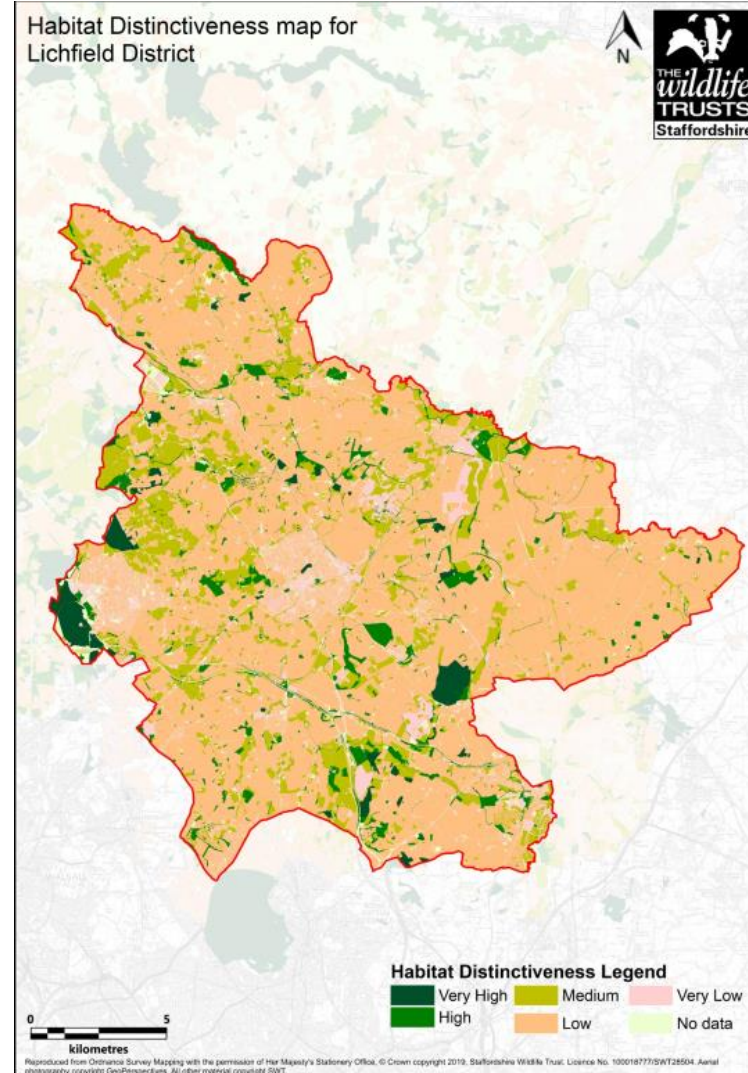
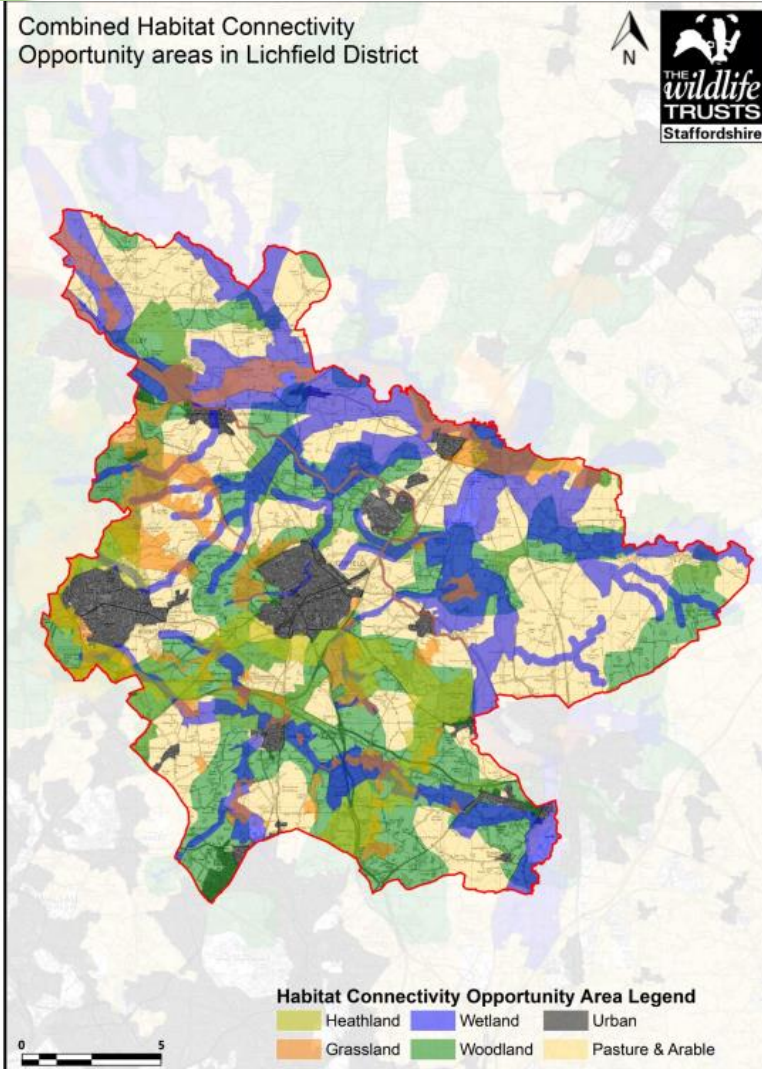
Drawing Prepared by:
Roberta Whittaker - GIS Officer

Coordinate System: British National Grid
Projection: Transverse Mercator
Datum: OSGB 1936
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False Northing: 100,000.0000
Central Meridian: -2.5000
Scale Factor: 0.9996
Latitude Of Origin: 49.0000
Units: Meter



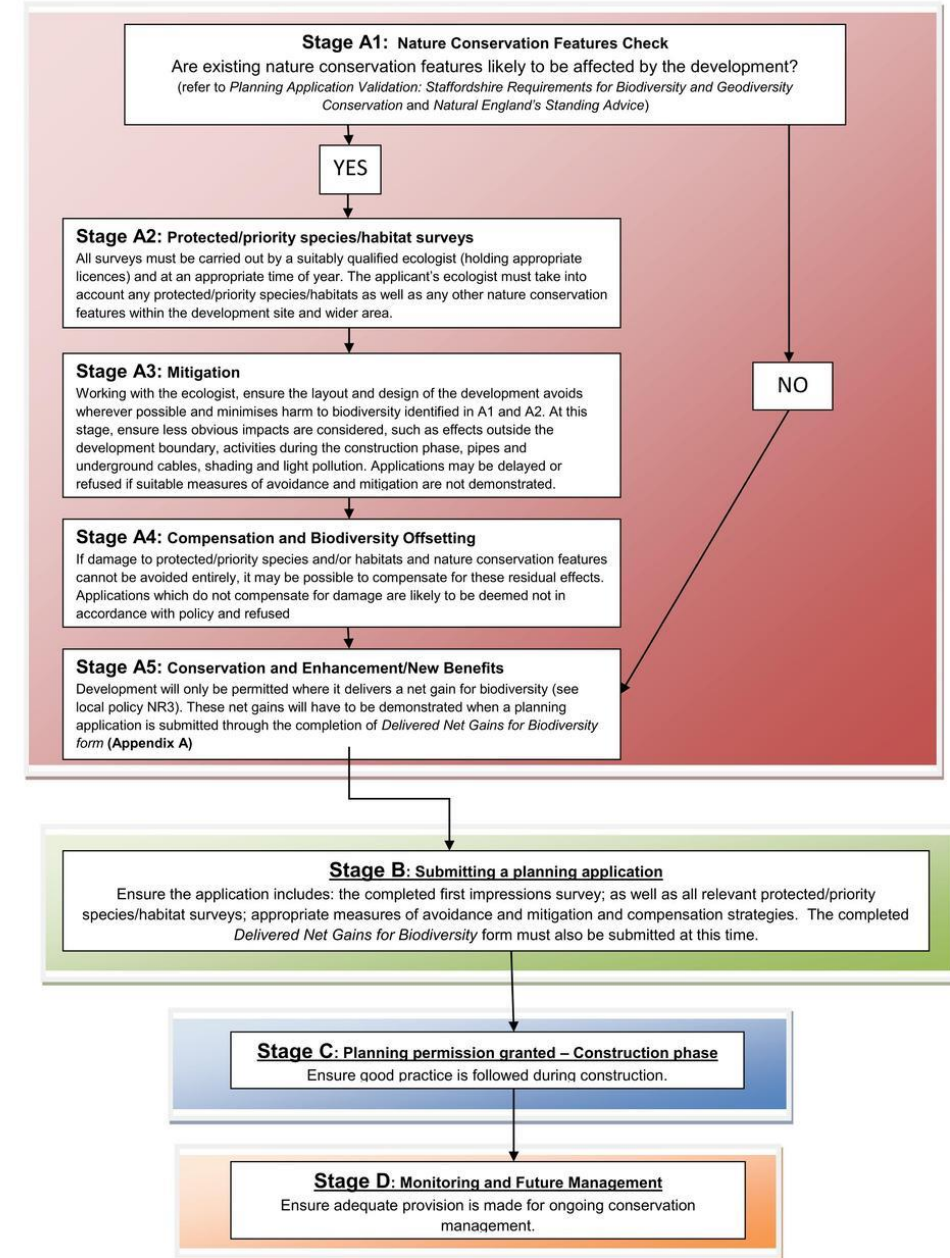
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Nature Recovery Network Mapping



BIODIVERSITY & DEVELOPMENT SPD

- Sets out a clear step-by-step process for how developers need to consider Biodiversity/protected/priority species & habitats within the Lichfield District.
- Further enshrines the Mitigation Hierarchy
- Puts a quantitative (i.e. measurable) minimum value for Net-Gains to be achieved by Major Developments.
 - 20% above the value of all habitats lost
 - The Replacement Percentage



BIODIVERSITY METRICS

$$\nabla_{\dot{\mathbf{x}}} \cdot \frac{\partial \mathcal{L}}{\partial \mathbf{p}} + \nabla_{\dot{\mathbf{y}}} \wedge \frac{\partial \mathcal{L}}{\partial \mathbf{q}} = 0 \quad \oint_{\text{全てのスペース}} (E + H \wedge T) \int_{-\infty}^{+\infty} \frac{\partial^2 \mathcal{R}}{\partial \phi \partial z} d\Omega d\tau = \frac{\Gamma(\mathcal{N}) \mathcal{J}(\Omega, \tau)}{(2\pi)^{\mathcal{N}} \mathcal{K}} d\mathbf{F} = \frac{\langle \Phi | \mathcal{J} | \Psi \rangle}{(2\pi)^{\mathcal{N}} c^2} \left[\gamma d\mathbf{\Sigma} + \mathbf{b} \frac{\partial \mathcal{G}}{\partial z} \wedge d\dot{\mathbf{x}} \right]$$

GIVES DECISION MAKERS CONFIDENCE AND REDUCES ECOLOGICAL JARGON

- Takes information available from:

Phase 1 habitat maps and Development Master Plans

- Gives every habitat within the red-line (before and after development) a value.
- Adds all values up for before and after development.





IF...

after value < before value = NET LOSS to BIODIVERSITY

amend scheme or refuse

IF...

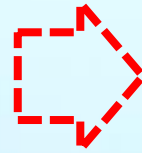
after value > before value = NET GAIN to BIODIVERSITY

FREE TO MAKE DETERMINATION

A PLANNING APPLICATION AT



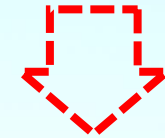
Pre App Advice &
Validation Discussions



Developer Conducts
Required Ecological
Surveys and Calculates
Biodiversity Metric



Submission of
Application and
Assessment of
Ecological Information



Ongoing Ecological
Monitoring (completed
by developer, secured
by condition)



Submission of
Information to
Discharge Condition



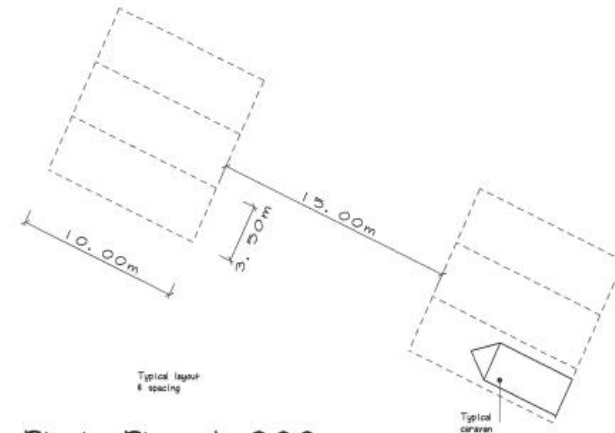
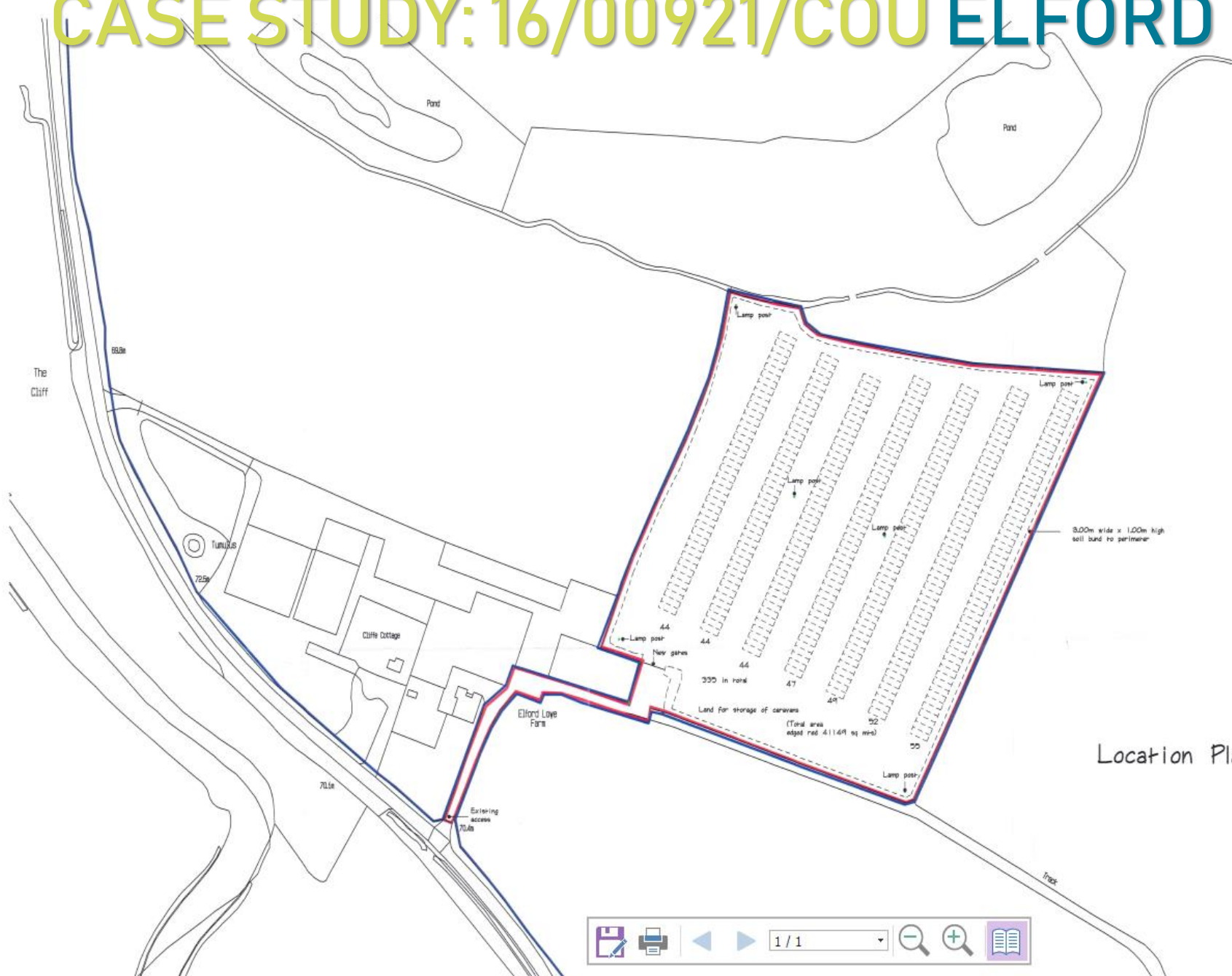
Recommendation of
Ecological Conditions
or Schedule within
S106 Agreement

An aerial photograph of a town, likely Exeter, showing a large cathedral with multiple spires situated on a hill. The town is surrounded by greenery and residential buildings. The text 'CASE STUDY 1' is overlaid in the center.

CASE STUDY 1

CASE STUDY: 16/00921/COU ELFORD LOWE FARM

RECEIVED
12 AUG 2016
LICHFIELD D.C.



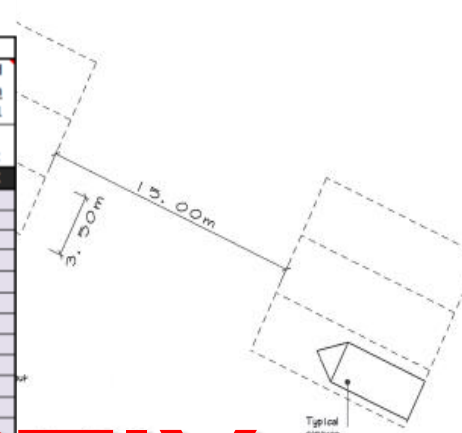
Block Plan 1-200



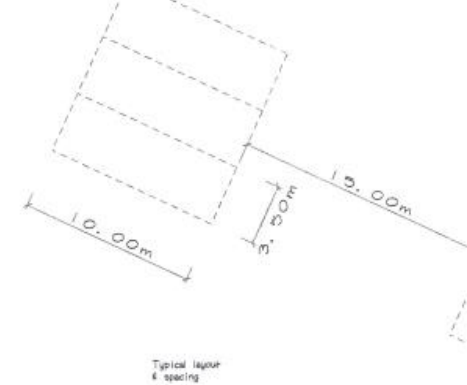
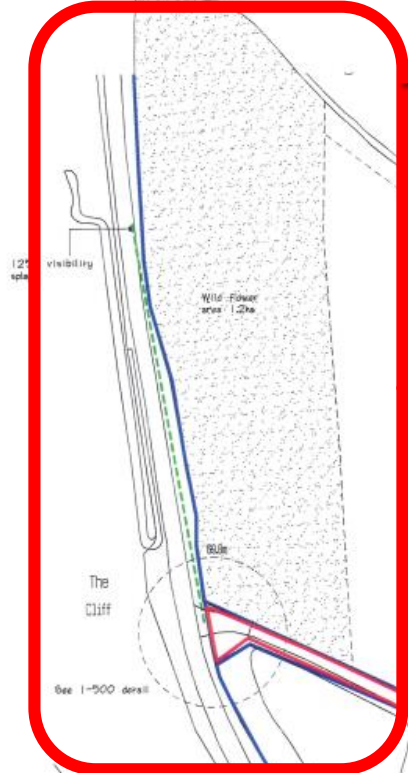
Location Plan 1-1250

Local Planning Authority:	Lichfield District Council
Site name:	Elford Lowe Farm, Elford Rd, Elford, Tamworth
Planning application reference number:	16/00921/COU
Site grid reference:	-
Assessor:	J Lloyd
Date:	18/10/2017
Edit comments:	-

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

[illegible]

NET-LOSS TO BIODIVERSITY



Block Plan 1-200



Location Plan 1-1250

Block Plan 1-500
(access)



67% NET-GAIN TO BIODIVERSITY

Parcel ID	Proposed habitats on site		Target habitats distinctiveness		Target habitat condition			Temporal factor		Difficulty factor		Biodiversity units generated
	Development, mitigation and onsite compensation	Area (ha)	Distinctive	Score	Condition	Score		Time (years)	Score	Difficulty	Score	
	1: Habitat recreation Enter target habitat to be recreated on area of development habitat impact	Q1		R1		S1			T1		U1	$(Q1 \times R1 \times S1) / T1 / U1$
	Built Environment: Buildings and hardstanding	2.85	None	0	Poor	1		5 years	1.2	n/a	1	0.00
	Total	2.85								Total		0.00
	2: Habitat creation Enter new target habitat to be created on land protected during development. To be of higher value than existing	Q2		R2		S2	Existing value V2 (= I)		T2		U2	$((Q2 \times R2 \times S2) - V2) / T2 / U2$
	Grassland: Other neutral grassland	2.00	Medium	4	Good	3	4.00	10 years	1.4	Medium	1.5	9.52
	Total	2.00								Total		9.52
	3: Habitat restoration Enter target habitat of retained areas to be restored	Q3		R3		S3	Existing value V3 (= G)		T3		U3	$((Q3 \times R3 \times S3) - V3) / T3 / U3$
	Total	0.00								Total		0.00
								Total				0.00
								Trading down correction				0.00
								Onsite compensation gain				9.52
								NBB = OCG - GBL				
								Net biodiversity balance				3.82
								Percentage of gross impact loss				
								Percentage of site biodiversity loss				

RECEIVED
12 AUG 2015
LICHFIELD D.C.

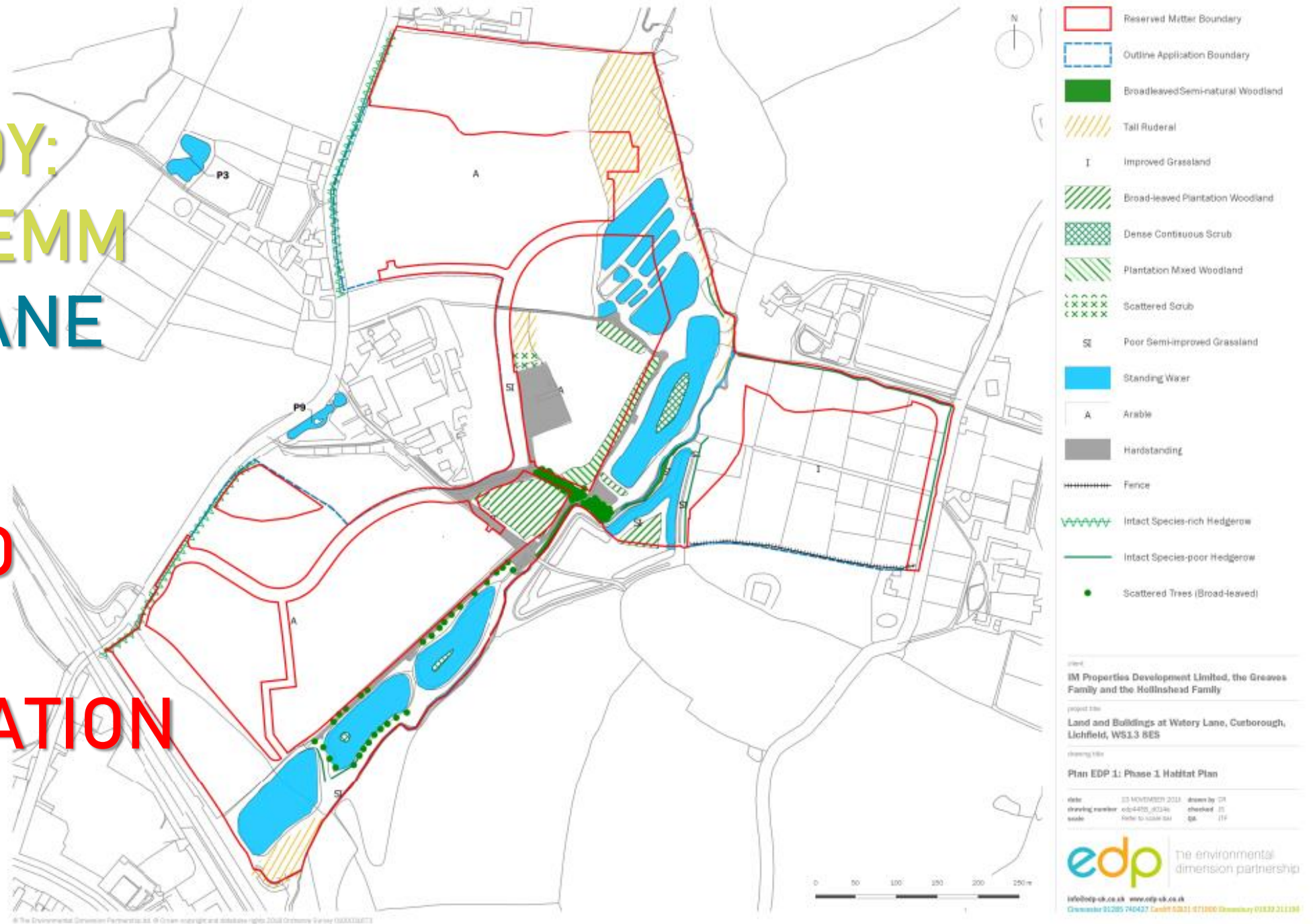


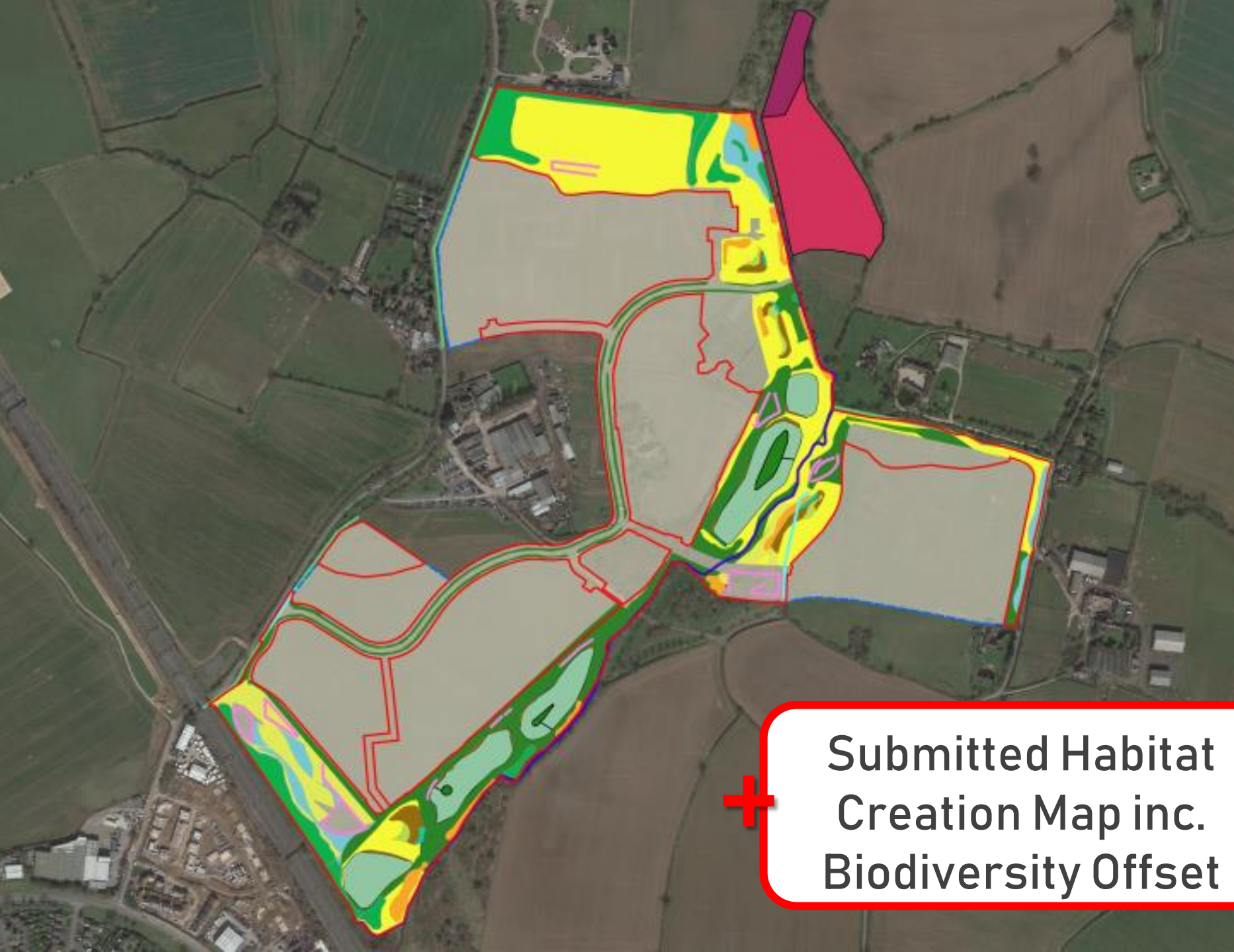
An aerial photograph of a town, likely Exeter, showing a large cathedral with multiple spires on a hill in the background. The foreground is filled with residential houses and trees. The text 'CASE STUDY 2' is overlaid in the center.

CASE STUDY 2

CASE STUDY: 18/01218/REMM WATERY LANE

ALL INFO.
SUBMITTED
CORRECT
AT APPLICATION





**Submitted Habitat
Creation Map inc.
Biodiversity Offset**

Reserved Matter Boundary

Outline Application Boundary

Linear

- Hedgerow Created
- Hedgerow Maintained
- Hedgerow Loss
- Stream Maintained

Restoration

- Scattered Trees in Amenity Areas
- Amenity Grassland
- Wildflower Meadow
- Broadleaved Woodland
- Buildings and Hardstanding
- Scrub
- Amenity and Gardens
- Marshy Grassland
- Lakes
- Reedbed

Creation

- Broadleaved Woodland
- Offset Meadow
- Offset Woodland

Client

IM Properties Development Limited, the Greaves Family and the Hollinshead Family

Project Title

Land and Buildings at Watery Lane, Curborough, Lichfield, WS13 8ES

Drawing Title

Plan EDP 2: Habitat Creation and Enhancement

Date 25 NOVEMBER 2016 **Drawn by** LB

Drawing number edp4455_8000a **Checked** JS

Scale 1:5,000 @ A3 **QA** QA

edp the environmental dimension partnership

info@edp-uk.co.uk www.edp-uk.co.uk
Gloucester 01285 740427 Cardiff 02921 671900 Shrewsbury 01303 211195

20.2% NET-GAIN TO BIODIVERSITY



PLANNING CONDITION:

Secure Net-Gains Onsite (within the Red line)

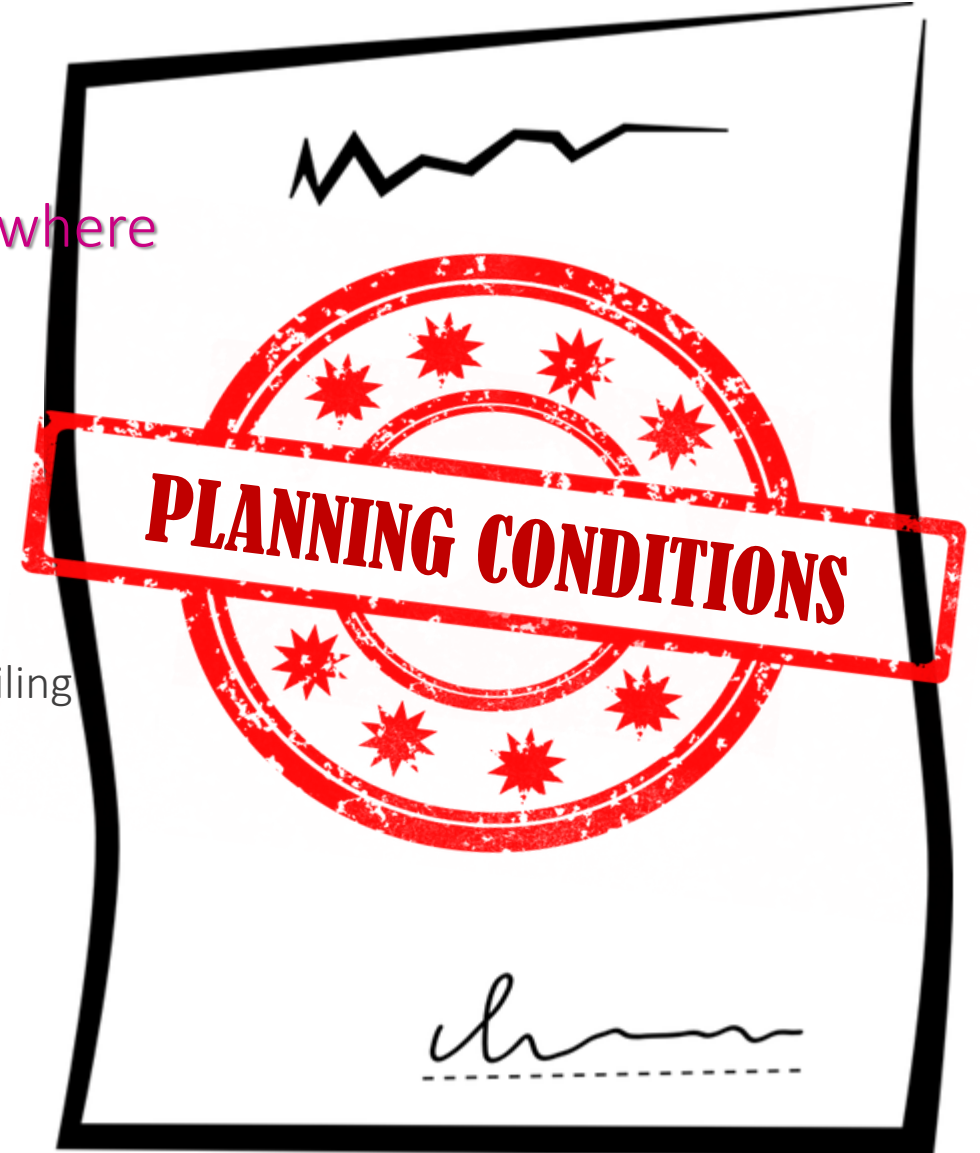
- Before any construction works hereby approved are commenced, a Construction Environment Management Plan (CEMP) and Habitat Management Plan (HMP) detailing, in full, measures to protect existing habitat during construction works and the formation of new habitat to secure a habitat compensation and biodiversity net gain of no less than ? Biodiversity Units, shall be submitted to and approved in writing by the Local Planning Authority. Within the CEMP/HMP document the following information shall be provided:
 - i. Current soil conditions of any areas designated for habitat creation and detailing of what conditioning must occur to the soil prior to the commencement of habitat creation works (for example, lowering of soil pH via application of elemental sulfur);
 - ii. Descriptions and mapping of all exclusion zones (both vehicular and for storage of materials) to be enforced during construction to avoid any unnecessary soil compaction on area to be utilised for habitat creation;
 - iii. Details of both species composition and abundance where planting is to occur;
 - iv. Proposed management prescriptions for all habitats for a period of no less than 25 years;
 - v. Assurances of achievability;
 - vi. Timetable of delivery for all habitats; and
 - vii. A timetable of future ecological monitoring to ensure that all habitats achieve their proposed management condition as well as description of a feed-back mechanism by which the management prescriptions can be amended should the monitoring deem it necessary. All ecological monitoring and all recommendations for the maintenance/amendment of future management shall be submitted to and approved in writing by the Local Planning Authority.
- The development shall be undertaken and thereafter maintained in accordance with the approved CEMP and HMP.

PLANNING CONDITION:

Secure Net-Gains Off-site (beyond the Red line)

- Before the development hereby approved is commenced, a scheme for the offsetting of biodiversity impacts at the site shall be submitted to and approved in writing by the Local Planning Authority. The proposed offsetting scheme, as detailed in document XXX, shall provide for the creation and/or improvement of habitat/s of a value no less than XXX Biodiversity Units & shall include:
 - i. Details of the offset requirements of the development, in accordance with a recognised biodiversity offsetting metric,
 - ii. The identification of a receptor site or sites which generates a minimum of XXX Biodiversity Units;
 - iii. The provision of arrangements to secure the delivery of offsetting measures, including a timetable for delivery;
 - iv. A management and monitoring plan, to include for the provision and maintenance of the offsetting measures for a period of no less than 25 years from the commencement of the development. The management and monitoring plan is to include:
 - v. Description of all habitats to be created/enhanced with the scheme including expected management condition and total area;
 - vi. Review of the ecological constraints;
 - vii. Detailed designs and/or working methods (management prescriptions) to achieve proposed habitats and management conditions, including extent and location of proposed works;
 - viii. Type and source of materials to be used, including species list for all proposed planting and abundance of species within any seed mix/planting scheme;
 - ix. Identification of the persons responsible for implementing the works;
 - x. A timetable of ecological monitoring to assess the success of all habitat creation/enhancement.
 - xi. A timetable of future ecological monitoring to ensure that all habitats achieve their proposed management condition as well as description of a feed-back mechanism by which the management prescriptions can be amended should the monitoring deem it necessary. All ecological monitoring and all recommendations for the maintenance/amendment of future management shall be submitted to and approved in writing by the Local Planning Authority.
- The offsetting scheme shall thereafter be completed in accordance with the approved details.

- **Must include correct Trigger**
 - Submission and approval of offsetting scheme or habitat management scheme prior to commencement
- **Allow LPA to retain control of what habitats are made where**
 - Linked to opportunity map
 - Control of vegetative species composition... etc.
- **Must include Ongoing Ecological Monitoring**
 - include mechanism to amend habitat management regime if it is failing
- Wording must be concise & **MUST BE ENFORCABLE**



BIODIVERSITY NET-GAINS IN LICHFIELD

MID 2015-PRESENT

- 80 major applications approved (or in final stages of approval (i.e. S106)) since model adopted:
- All applications demonstrated a likely net gain above 20% (above value lost)
- A number of developments achieving greater than 100%
- Average likely net gain score in Lichfield District is 59.33%
- Average biodiversity units that are net gain is 8.04



**+20%
+100%**

**59.33%
8.04**



TO THE FUTURE™

- Biodiversity Offsetting Strategy
- Habitat Banking & Conservation Credit Scheme
- Ecological Joint Approach Group
 - Nature Recovery Network Mapping
 - Detailed Habitat Connectivity Mapping
- Developing the Economy of Nature Conservation in Lichfield and beyond.



THANK-YOU

Any Questions?



Presentation made in conjunction with the Cannock Chase S.A.C. Partnership