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15<sup>th</sup> October 2018

Land East of Chipping  
Lane, Longridge –  
Phase 2/3

Great Crested Newt  
Survey Report

Report Number: 11319\_R05\_LRD\_JW

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ACIEEM



Tyler Grange

Birmingham • Cotswolds • Exeter • London • Manchester

# Contents

Section 1: Introduction .....	1
Section 2: Methodology.....	2
Section 3: Survey Results .....	4
Section 4: Assessment and Recommendations .....	6
References: .....	7

# Appendix

Appendix 1: Planning Layout (Ref 459-PL04 rev 02)

Appendix 2: GCN eDNA Results

# Plan

Habitat Features (wider site)

2001/P04c June 2014

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# Section 1: Introduction

- 1.1. Tyler Grange LLP (TG) has been commissioned to prepare a great crested newt *Triturus cristatus* (GCN) survey report for Phases 2 and 3 of proposed development to the immediate north of the settlement of Longridge (hereafter referred to as the 'site') to accompany a Reserved Matters planning application. The site is centred on Ordnance Survey (OS) grid reference SD 60476 37946 and extends to a total area of 10.56 hectares.
- 1.2. An Ecological Assessment (Document 2001/R08b) was originally prepared by TG in March 2015 to accompany an outline planning application (Reference 3/2014/0764). The ecological assessment found no evidence of GCN within ponds within 250m of the site, but due to the time that has passed since the previous survey was completed (2014), an update survey has been undertaken to confirm that recommendation made are still valid.

## *Legislation and Conservation Status*

- 1.3. As a European Protected Species great crested newt (GCN) receives legal protection in England under the Conservation of Habitats and Species Regulations 2017 and the Wildlife and Countryside Act 1981 (as amended). In addition, planning policy set out in the National Planning Policy Framework 2018 requires planning authorities to consider GCN when determining planning applications and to ensure that development proposals do not lead to an adverse effect on the conservation status of GCN.
- 1.4. GCN are listed on Schedule 2 of the Conservation of Habitats and Species Regulations 2017 as a European protected species (EPS) of animal. Regulation 41 (1) makes it an offence to:
  - Deliberately capture, or injure an EPS;
  - Deliberately disturb an EPS;
  - Deliberately take or destroy the eggs of an EPS; or
  - Damage or destroy a breeding site or resting place of an EPS.
- 1.5. Although GCN still maintains a widespread distribution in England, the species is in decline, notably through loss of breeding ponds. A greater decline has been noted across the species European range. The UK holds a large proportion of the world population. GCN is a Species of Principal Importance (SoPI) listed on Section 41 of the Natural Environment and Rural Communities Act 2006.



# Section 2: Methodology

## *Previous Results*

- 2.1. Ponds 1 – 4 were surveyed by Tyler Grange in accordance with standard guidelines (English Nature, 2001) in 2014 to accompany the outline planning application. No GCN were recorded in any of the ponds surveyed and it was concluded that GCN were absent from the development site.

## *Desk Study*

- 2.2. Lancashire Environmental Records Network (LERN) was contacted in July 2018 for updated records of GCN and other amphibians occurring within 1km of the site boundary.
- 2.3. Thirty-four records of GCN have been recorded within 1km of the site boundary, with the closest record occurring 900m west in 2015. No other amphibians have been recorded within 1km of the site boundary.

## *Scope of Survey*

- 2.4. There is one pond (Pond 3) located within the boundary of the Phase 2/3 site boundary. A further three ponds (Pond 1, Pond 2 and Pond 4) are located within 250m of the site boundary (see **Habitat Features Plan 2001/P04c**).

## *Habitat Suitability Index (HSI)*

- 2.5. The Habitat Suitability Index (HSI) assigns a score to a pond based upon various factors including, size of pond, aquatic vegetation, shading, geographic location, proximity to other ponds, and potential presence of fish. A score is given to each water-body between 0 and 1, with scores closer to zero having lower probability of GCN occurrence. The HSI cannot be used as confirmation of GCN presence or absence but is used as a guide to assess the habitat in terms of its potential to support great crested newts. It also provides useful information that can inform pond management and enhancement programmes.
- 2.6. The Natural England (NE) HSI classifications are provided below:
  - Poor < 0.5;
  - Below average .5 – 0.59;
  - Average 0.6 – 0.69;
  - Good 0.7 – 0.79; and
  - Excellent 0.8.
- 2.7. An HSI was calculated for each pond in accordance with standard methods (Oldham *et al.*, 2000).

## *eDNA Sampling*

- 2.8. Water samples were collected using sterile kits provided by Nature Metrics, to be subject to environmental DNA (eDNA) analysis, which provides a positive or negative result for GCN DNA. Survey methods followed the standard methodology provided within 'Appendix 5: Technical advice note for field and laboratory sampling of great crested newt (*Triturus cristatus*) environmental DNA' (Biggs *et al.*, 2014).



- 2.9. The samples were collected on 27<sup>th</sup> June 2018 by Joseph Dance, a Natural England GCN Class Licence holder and graduate member of the Chartered Institute of Ecology and Environmental Management (CIEEM).
- 2.10. Due care and attention were paid during eDNA sampling to avoid stirring up sediment and to take samples covering the full extent of the ponds including clear areas of water, deeper areas of the pond and areas close to potential egg laying vegetation, to ensure that every possible chance of detecting GCN, should they be present, was taken for each waterbody.

### *Limitations*

- 2.11. Ponds 2, 3 and 4 were dry at the time of the survey and are thought to have been dry for a significant length of time due to the dry spring experienced during 2018. These ponds remained dry during follow-up site visits to undertake bat surveys during August and September. Therefore, it is considered highly unlikely that these ponds are being used by GCN or other amphibians, and this is not considered to be a significant limitation to the survey findings.
- 2.12. No other limitations were experienced during the survey.



## Section 3: Survey Results

### Habitat Suitability Index (HSI)

3.1. An HSI score was calculated for each of the ponds surveyed. Full details are provided in **Tables 1 – 4**, and are summarised below:

- Scrape 1 – 0.76 (good);
- Scrape 2 – 0.67 (average);
- Inundation area – 0.78 (good); and
- Ornamental pond – 0.7 (good).

**Tables 1 – 4: Habitat Suitability Index assessment of Ponds 1 – 4.**

Pond 1			Pond 2		
<b>Grid Reference</b>	SD 6039 3818		<b>Grid Reference</b>	SD 6048 3815	
<b>Description</b>	Field pond along hedgerow boundary, partially shaded by willow/alder trees, with some emergent vegetation including soft rush.		<b>Description</b>	Field pond shaded by scrub, with some emergent vegetation including soft rush and reed canary grass.  Dry at the time of the survey.	
<b>Distance to Site</b>	60m north		<b>Distance to Site</b>	50m north	
<b>SI<sub>1</sub>- Location</b>	Zone A	1	<b>SI<sub>1</sub>- Location</b>	Zone A	1
<b>SI<sub>2</sub>- Pond area</b>	150m <sup>2</sup>	0.3	<b>SI<sub>2</sub>- Pond area</b>	150m <sup>2</sup>	0.3
<b>SI<sub>3</sub> - Pond drying</b>	Never	0.9	<b>SI<sub>3</sub> - Pond drying</b>	Sometimes	0.5
<b>SI<sub>4</sub> - Water quality</b>	Poor	0.33	<b>SI<sub>4</sub> - Water quality</b>	Poor	0.33
<b>SI<sub>5</sub> - Shade</b>	20%	1	<b>SI<sub>5</sub> - Shade</b>	90%	0.4
<b>SI<sub>6</sub> - Fowl</b>	Minor	0.67	<b>SI<sub>6</sub> - Fowl</b>	Absent	1
<b>SI<sub>7</sub> - Fish</b>	Possible	0.67	<b>SI<sub>7</sub> - Fish</b>	Absent	1
<b>SI<sub>8</sub> – Ponds in 1km<sup>2</sup></b>	9	0.95	<b>SI<sub>8</sub> – Ponds in 1km<sup>2</sup></b>	9	0.95
<b>SI<sub>9</sub> – Terrestrial habitat</b>	Moderate	0.67	<b>SI<sub>9</sub> – Terrestrial habitat</b>	Moderate	0.67
<b>SI<sub>10</sub> - Macrophytes</b>	20%	0.5	<b>SI<sub>10</sub> - Macrophytes</b>	30%	0.6
<b>HSI Score</b>	Average	0.64	<b>HSI Score</b>	Average	0.61



Pond 3			Pond 4		
<b>Grid Reference</b>	SD 6059 3794		<b>Grid Reference</b>	SD 6022 3828	
<b>Description</b>	Small depression along hedgerow in pasture field. Shaded by hedgerow trees.  Dry at time of survey.		<b>Description</b>	Shallow pond along field boundary, partially shaded woody vegetation.  Dry at time of survey.	
<b>Distance to Site</b>	On site		<b>Distance to Site</b>	200m north	
<b>Sl<sub>1</sub> - Location</b>	Zone A	1	<b>Sl<sub>1</sub> - Location</b>	Zone A	1
<b>Sl<sub>2</sub> - Pond area</b>	25m <sup>2</sup>	0.1	<b>Sl<sub>2</sub> - Pond area</b>	150m <sup>2</sup>	0.3
<b>Sl<sub>3</sub> - Pond drying</b>	Annually	0.1	<b>Sl<sub>3</sub> - Pond drying</b>	Annually	0.1
<b>Sl<sub>4</sub> - Water quality</b>	Poor	0.33	<b>Sl<sub>4</sub> - Water quality</b>	Poor	0.33
<b>Sl<sub>5</sub> - Shade</b>	80%	0.6	<b>Sl<sub>5</sub> - Shade</b>	25%	1
<b>Sl<sub>6</sub> - Fowl</b>	Absent	1	<b>Sl<sub>6</sub> - Fowl</b>	Absent	1
<b>Sl<sub>7</sub> - Fish</b>	Absent	1	<b>Sl<sub>7</sub> - Fish</b>	Absent	1
<b>Sl<sub>8</sub> - Ponds in 1km<sup>2</sup></b>	9	0.95	<b>Sl<sub>8</sub> - Ponds in 1km<sup>2</sup></b>	9	0.95
<b>Sl<sub>9</sub> - Terrestrial habitat</b>	Moderate	0.67	<b>Sl<sub>9</sub> - Terrestrial habitat</b>	Moderate	0.67
<b>Sl<sub>10</sub> - Macrophytes</b>	0%	0.3	<b>Sl<sub>10</sub> - Macrophytes</b>	0%	0.3
<b>HSI Score</b>	Poor	0.45	<b>HSI Score</b>	Below Average	0.53

### *eDNA Sampling*

- 3.2. The results of the eDNA sampling of Pond 1 are provided in **Table 1**. A negative result was returned for GCN eDNA. Full details of the results provided by Nature Metrics are provided in **Appendix 1**.

**Table 1: Results of eDNA sampling of Pond 1 provided by Nature Metrics.**

Pond Ref	Sample	Date Sample Taken	Date Sample Arrived	Lab	GCN Status (QPCR Replicates)	Inhabitation	Degradation
Pond 1	GCN18-2456	27.06.18	29.06.18	Nature Metrics	Negative (0)	No	No



# Section 4: Assessment and Recommendations

## *Assessment and Recommendations*

- 4.1. Based on the finding of the update eDNA survey and HSI of ponds within the survey area, it is concluded that GCN continue to be absent from the site, and as such no specific mitigation is required for this species.





# References

Biggs J. *et al.* (2014). Analytical and methodological development for improved surveillance of the Great Crested Newt. Appendix 5. Technical advice note for field and laboratory sampling of great crested newt (*Triturus cristatus*) environmental DNA. Freshwater Habitats Trust, Oxford.

English Nature (2001). *Great Crested Newt Mitigation Guidelines*. English Nature, Peterborough.

Oldham, R.S., Keeble, J., Swan, M.J.S. and Jeffcote, M. (2000). *Evaluating the suitability of habitat for the Great Crested Newt (Triturus cristatus)*. Herpetological Journal 10 (4), 143-155.



# Appendix 1: Planning Layout (459-PL04 rev 02)



Land East of Chipping Lane, Longridge  
Great Crested Newt Survey Report

11319\_R05\_15 October 2018\_LRD\_JW

**WARNING TO HOUSE PURCHASERS**  
**Property Misdescriptions Act 1991**  
 Buyers are warned that this is a working drawing and is not intended to be relied on as a definitive statement of the details of any particular property or development, any of the specific matters mentioned by any other clause in the above contract. The contents of this drawing may be subject to change of plan, site and dimensions and conditions can occur during the progress of the works without notice of the drawing. Consequently the buyer, from contract and otherwise, of the stated conditions may differ from those shown here in the contents of this drawing constitute a contract, part of any contract, or warranty.

**SCHEDULE OF ACCOMMODATION**

Ref	Barratt Type	House Type	Soft	No	Total Sqft	
<b>AFFORDABLE TYPES</b>						
<b>STANDARD</b>						
KEN	Kenley	2 Bedroom affordable mews	624	21	13104	
BRN	Brandon	3 Bedroom affordable mews	706	20	14120	
<b>ELDERLEY</b>						
BED	Bedale	2 Bed LTH Bungalow	594	7	4158	
BEL	Belmont	2 Bed LTH House	731	7	5117	
<b>AFFORDABLE TOTAL</b>						
					55	36499
<b>PRIVATE SALE TYPES</b>						
<b>ELDERLEY</b>						
BED	Bedale	2 Bed LTH Bungalow	594	7	4158	
BEL	Belmont	2 Bed LTH House	731	7	5117	
<b>STANDARD</b>						
MAI	Maldstone	3 Bed semi-detached house	830	26	21580	
MOR	Moresby	3 Bed dual aspect semi-detached house	854	18	15372	
KING	Kingville	3 bed townhouse	1072	14	15008	
LUT	Lutterworth	3 bed detached house	1001	5	5005	
ALD	Alderney	4 bed dual aspect detached house	1225	19	23275	
DER	Derwent	3 bed detached house	920	9	8280	
WIN	Windermere	4 bed detached house	1073	22	23606	
THD	Thornton	4 bed detached house	1202	4	12024	
HAY	Hayton	4 bed detached house	1267	3	12672	
<b>PRIVATE SALE TOTAL</b>						
					129	123870
<b>Total number of units and square footage</b>					184	160369
<b>Gross Site Area in Acres</b>					26.11	
<b>Total Undevelopable area in acres</b>					14.15	
<b>Net Site Area in Acres</b>					11.96	
<b>Density (units per acre)</b>					15	
<b>Density (units per hectare)</b>					38	
<b>Square foot / Acre</b>					13,409	

**DRAWING KEY**

- (AF) AFFORDABLE DWELLINGS
- (EL) DWELLING FOR THE ELDERLY
- Ⓣ PROPOSED TRIM TRAIL ITEM
- ☉ TREE/ HEDGE TO BE REMOVED
- ☉ TREE/ HEDGE TO BE RETAINED
- ▨ BLOCK PAVINGS (RED)
- Ⓞ PROPOSED INDICATIVE TREE PLANTING
- Ⓞ 1800mm TIMBER GATE

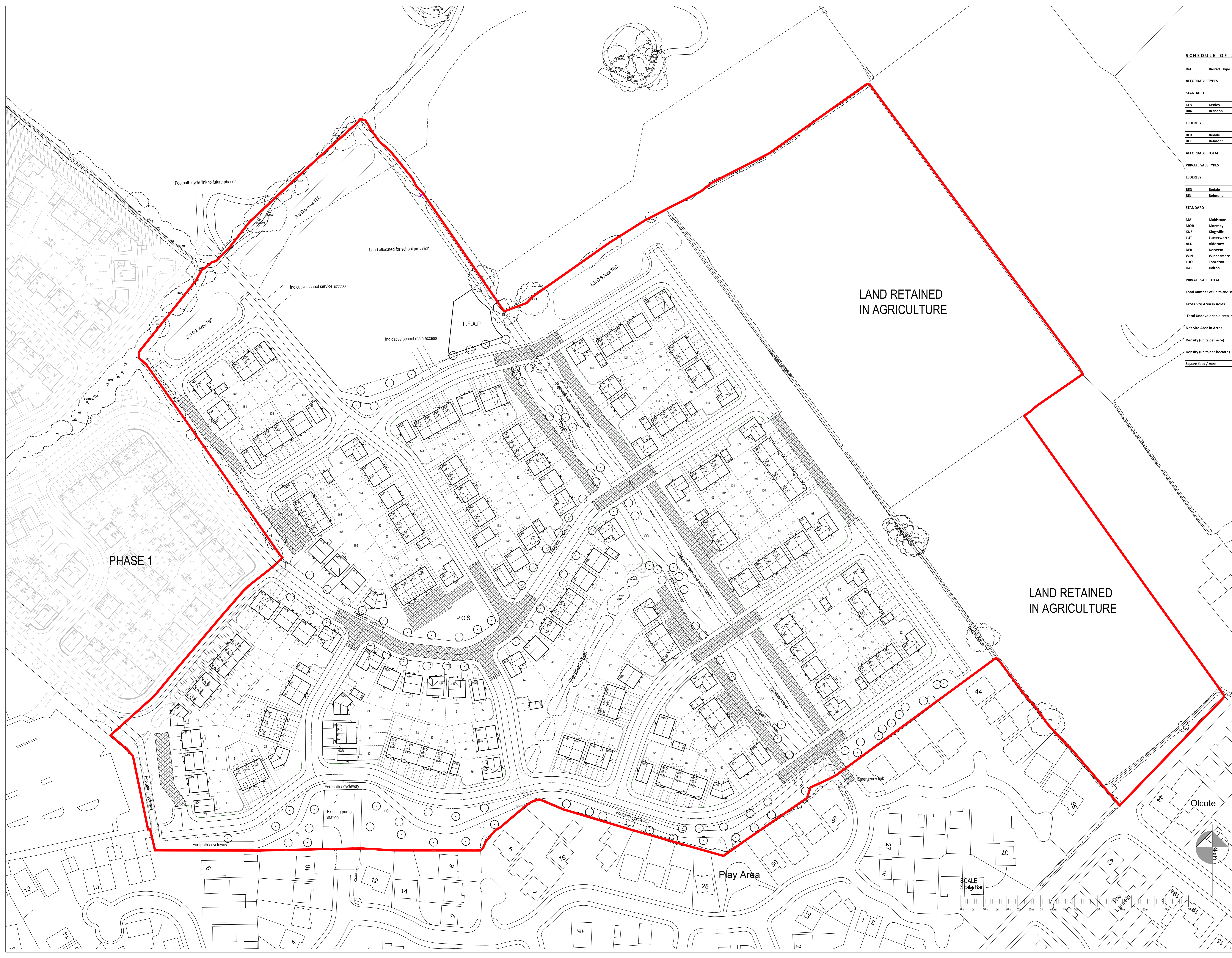
Rev	Description	Date	Drawn	Checked
02	Tree adjacent to emergency exit shown as removed	15-10-18	AA	
01	Site plan amended	12-10-18	AA	

**BARRATT HOMES MANCHESTER**  
 Barratt Homes Manchester  
 (A division of BDW Trading Ltd)  
 4 Bradley Road  
 City Park  
 Manchester  
 M16 9HQ  
 Tel: 0161 872 9161  
 Fax: 0161 855 2828

CHIPPING LANE LONGDRIDGE

PHASE 2 / 3  
 PLANNING LAYOUT

Design By	Scale	Scale Date	Drawing Number	Rev
AA	1:500	15-10-18	459-PL04	02
Drawn By	AA	15-10-18		



LAND RETAINED  
 IN AGRICULTURE

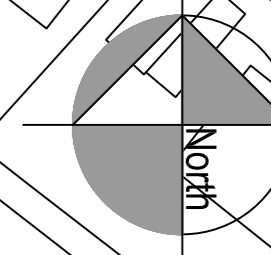
LAND RETAINED  
 IN AGRICULTURE

PHASE 1

Play Area

SCALE  
 Scale Bar

Olcote



The Laurels

# Appendix 2: GCN eDNA Results (Nature Metrics)



18316-TY-LD-1      Order number: TYG-21-LD

# Great Crested Newt eDNA Results

Company: Tyler Grange  
 Address: Marsden Estate, Rendcomb GL7 7EX  
 Contact: Laura Dennis  
 Project code | Task code: 11319 | 2062018  
 Date of Report: 10 July 2018  
 Number of samples: 1

Thank you for sending your sample for analysis by NatureMetrics. Your sample has been processed in accordance with the protocol set out in Appendix 5 of Biggs et al. (2014).

DNA was precipitated via centrifugation at 14,000 x g and then extracted using Qiagen Blood and Tissue extraction kits.

qPCR amplification was carried out in 12 replicates per sample, using the primers and probe described by Biggs et al. (2014), in the presence of both positive and negative controls.

Results indicate GCN absence in your sample. No degradation or inhibition was detected, and all controls performed as expected. Conclusive results are therefore presented.

Results are based on the samples as supplied by the client to the laboratory. Incorrect sampling methodology may affect the results. Note that a negative result does not preclude the presence of Great Crested Newts at a level below the limits of detection.

Sample	Pond ID	Date arrived	Inhibition	Degradation	eDNA score	GCN status
GCN18-2456	'Pond 1'	29-Jun-18	No	No	0	Negative

End of report

---

Report issued by: Dr. Cuong Tang

Contact: ct@naturemetrics.co.uk | 01491 829042



## Understanding your results

- Positive:** GCN DNA has been detected in this sample, meaning that at least one of the 12 replicates has amplified. Remember that this is not a quantitative test, so you should not interpret a high eDNA score (e.g. 12/12) as necessarily indicating a larger population of GCN than a low eDNA score (e.g. 1/12).
- Negative:** No GCN DNA has been detected in this sample, and the internal and external controls worked as expected. This tells us that if there had been GCN DNA in the sample, we would have detected it, so we can be confident in its absence from the sample provided.
- Inconclusive:** No GCN DNA was detected in the sample, but the internal controls failed to amplify as expected. This means that any GCN DNA in the sample might also have failed to amplify properly, so we cannot have confidence in this negative result. Inconclusive results can be caused by degradation of the DNA (when the DNA marker contained in the ethanol in the kits fails to amplify) or by inhibition of the reaction (when the marker added in the lab fails to amplify) caused by certain chemicals or organic compounds that may be present in the water sample.



# Plan

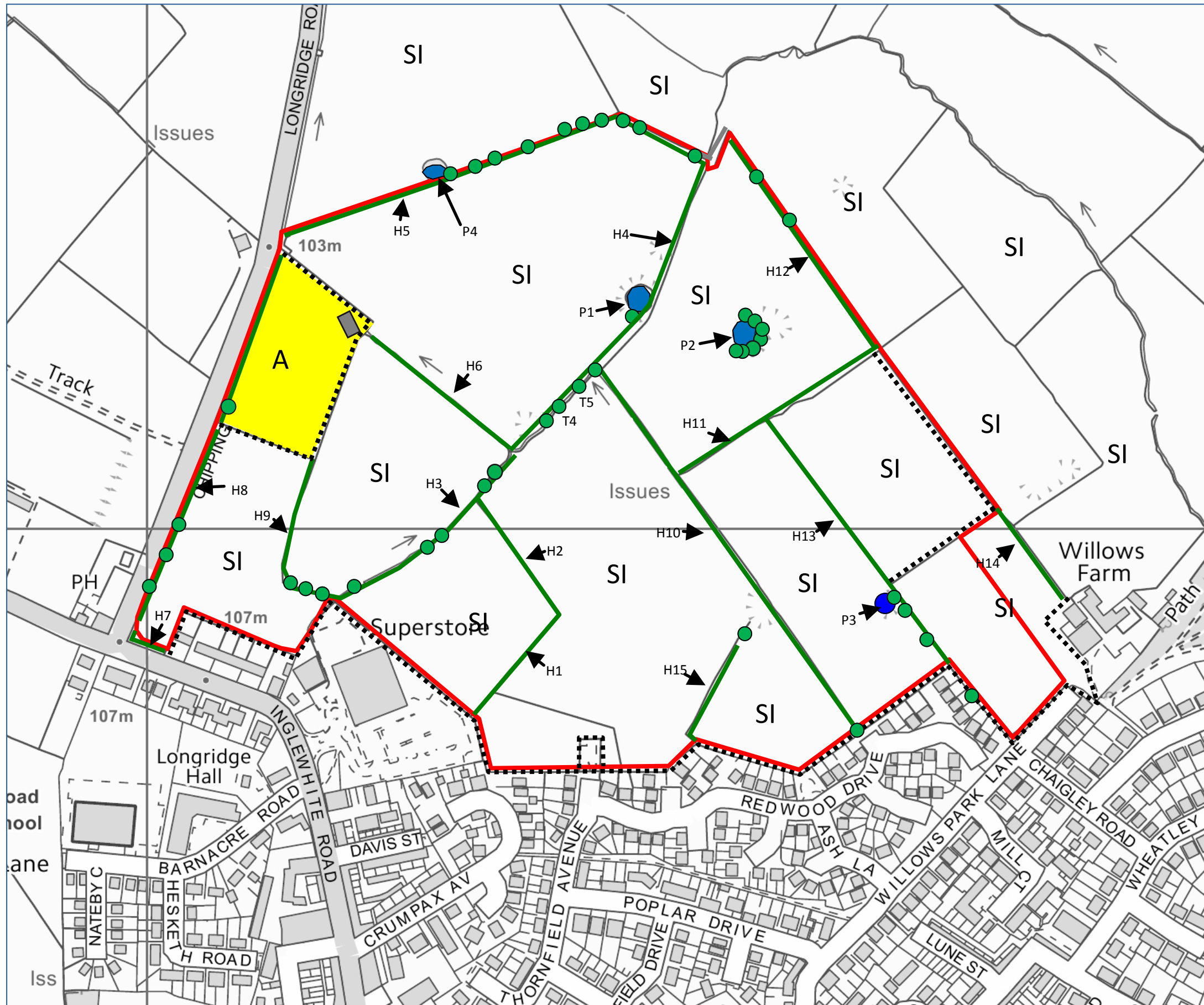
Habitat Features Plan (wider site)












2001/P04c June 2014

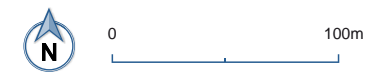


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11319\_R05\_15 October 2018\_LRD\_JW



-  Building
-  Species Poor  
Semi-improved Grassland
-  Amenity Grassland
-  Pond
-  Mature Hedgerow Trees
-  Hedgerow
-  Dry stone wall
-  Fence
-  Site boundary
-  Hedge number
-  Pond number



Project | Bowland Meadows and Higgins Brook, Land East of Chipping Lane, Longridge

Drawing Title | **Habitat Features Plan**

Scale | As Shown (Approximate)

Drawing No. | 2001/P04c

Date | August 2014

Checked | JM/JE



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