

# LAND OFF WEST MOOR CROFT ROAD, GOLDTHORPE (PHASE 3)

**Supplementary Ecological Information (SEI) including  
Biodiversity Net Gain (BNG) assessment, including ecological  
Enhancement of New Park Springs**

Prepared for Gleeson Homes Limited

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Project Name	Land off Moor Croft Road, Goldthorpe (Phase 3)
Report Title	Supplementary Ecological Information (SEI)
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Appendix 7: Results of great crested newt eDNA surveys

## 1.0 INTRODUCTION

### 1.1 Terms of Reference

SLR Consulting Ltd was commissioned by Gleeson Homes Ltd to provide Supplementary Ecological Information (SEI) for a proposed development to the west of Moor Croft Road, Goldthorpe, South Yorkshire (central OS grid reference SE 46570369).

This assessment was undertaken in order to inform a planning application for up to 68 houses and associated infrastructure. This application is the final phase of a three-phase scheme of development for which the first phase is complete, and the second phase is under construction.

### 1.2 Site Description

The application site (hereafter referred to as the 'Site') consists of a single disused field, approximately 2.15ha in size, enclosed by approximately 570 metres of hedgerow, mostly species-poor native in character.

The field itself supports a mix of dense bramble scrub and scattered scrub, tall ruderals, and small patches of open flower-rich and more extensive (less flower-rich) coarse grass-dominated swards elsewhere. A small area of marshy grassland occurs at the southern end of the Site, supporting a large number (*circa* 250) of marsh orchids (*Dactylorhiza* sp.) and small numbers of common spotted orchids (*Dactylorhiza fuchsii*, Plate 1).



Plate 1: Patch of marsh orchids within the application site (June 2021)

Land immediately to the east of the Site supports recently constructed properties and properties under construction which comprise Phase 1 and Phase 2 of this housing scheme. Land to the south of the Site supports areas of marshy and wet grassland, a wet ditch and a large pond with marginal and aquatic vegetation. Allotments and areas of scrub lie to the west of the Site, and housing off Lindale Gardens lies to the north.

### 1.3 Details of the Proposed Development

Proposals involve the construction of up to 68 houses and associated infrastructure, as set out in Appendix 1.

### 1.4 Background and Purpose of this Report

This report follows on from the Ecological Impact Assessment (EclA) that was submitted by SLR Consulting in October 2020<sup>1</sup>.

In response to the EclA, correspondence was received from Wildscapes, dated 19<sup>th</sup> April 2021, who had been appointed by Barnsley Borough Council to undertake an independent appraisal of the EclA; their full response is provided in Appendix 2, but in summary, comments were as follows:

- No Biodiversity Net Gain assessment had been carried out;
- Clarification was sought on the extent of the hedgerow loss;
- Further bat foraging surveys were recommended;
- Sets out the mitigation and compensation measures required to ensure compliance with nature conservation legislation and/ or to address any potentially significant ecological effects, where relevant;
- Provides an assessment of the significance of any residual effects to important receptors (where relevant), and the legal and policy implications; and
- Identifies appropriate enhancement measures, where appropriate.

## 2.0 METHODOLOGY

### 2.1 Biodiversity Net Gain Assessment

The Extended Phase I Habitat map provided as part of the October 2020 EclA (Appendix 3) has been assessed and its value calculated using Metric 3.0<sup>2</sup>.

From this it may be seen that the baseline (pre-development) value of the site is 11.78 biodiversity units, comprising:

Habitat	Area (ha)	Distinctiveness	Condition	Biodiversity Units
Bramble scrub	0.4	Medium	Poor	1.84
Mixed scrub (footprint of hedgerows H1 -H6)	0.11	Medium	Moderate	1.01
Other neutral grassland (including marshy grassland supporting orchids)	0.14	Medium	Good	1.93
Other neutral grassland (without orchids)	1.50	Medium	Poor	6.90
				<b>11.68</b>

Similarly, the number of hedgerow units within and bordering the site has been calculated, and equates to 3.05 units, comprising (refer to Phase I Habitat map in Appendix 3 for locations):

<sup>1</sup> SLR Consulting (October 2020), Ecological Impact Assessment (EclA) v2 for Land off West Moor Croft Road, Goldthorpe (Phase 3)

<sup>2</sup> The Biodiversity Metric 3.0, auditing and accounting for biodiversity, Technical Supplement, Beta Edition, Natural England Joint Publication JP029, Natural England.

Hedgerow reference	Length (metres)	Distinctiveness	Condition	Hedgerow Units
H1	52	Medium	Moderate	0.48
H2	180	Low	Moderate	0.83
H3	90	Low	Moderate	0.41
H4	165	Low	Moderate	0.76
H5	70	Low	Moderate	0.32
H6	13	Very Low	Poor	0.01
	<b>570</b>			<b>2.82</b>

### 2.1.1 Delivery of Biodiversity Units within the Application Site Itself

The Detailed Landscape Proposals for the site are provided as Appendix 5.

From this it may be seen that many of the hedgerows shall be extended, as summarised overleaf, and as reflected in the Metric 3.0 calculation (Appendix 4):

Hedgerow Post-Development	Length (metres)	Distinctiveness	Condition	Hedgerow Units
H1	68 (+16 metres)	Medium	Moderate	0.60
H2	250 (+70 metres)	Low	Moderate	1.10
H3	130 (+40 metres)	Low	Moderate	0.56
H4	165 (unchanged)	Low	Moderate	0.76
H5	75 (unchanged)	Low	Moderate	0.32
H6	25 (+12 metres)	Low/ Very Low	Poor/ Moderate	0.06
	<b>708</b>			<b>3.41</b>

In summary there will be an overall net increase of 138 linear metres of native hedgerow, resulting in an overall net gain of 0.59 biodiversity units. The sections of new hedgerow shall comprise field maple (*Acer campestre*), hazel (*Corylus avellana*), hawthorn (*Crataegus monogyna*), holly (*Ilex aquifolium*), blackthorn (*Prunus spinosa*), goat willow (*Salix caprea*) and guelder rose (*Viburnum opulus*). The existing and new planting will, on average, be 2 metres wide (measured in terms of canopy spread), equating to an area of 0.14ha.

The site shall also contain 28 medium-sized urban trees, comprising a mixture of native and non-native species, with a combined footprint of 0.11ha and approximately 0.64ha of vegetated gardens.

A summary of the biodiversity value of the site itself, post-development, is summarised below:

Habitats on site post-development	Area (ha)	Distinctiveness	Condition	Biodiversity Units
Mixed scrub (footprint of hedgerows H1 -H6)	0.14	Medium	Moderate	1.24
Urban trees (28 in total)	0.11	Medium	Moderate	0.39
Vegetated garden	0.64	Low	Poor	1.42
Buildings, roads and other sealed surfaces	1.26	Very Low	N/A	0.00
				<b>3.05</b>

The site itself shall therefore have an overall net increase of 0.59 hedgerow units, but an overall net decrease of

## 8.63 biodiversity units.

Correspondence from Ms Hannah Andrew, Senior Planning Officer at Barnsley Borough Council, dated 24<sup>th</sup> January 2022 confirms that Policy BIO 1 states that there should be no net loss in terms of biodiversity, and that this is consistent with the SPD (Appendix 6). As such, the shortfall of 8.63 biodiversity units needed to be offset.

### 2.1.2 Delivery of Biodiversity Unit Shortfall within New Park Spring Country Park

In order to deliver this shortfall, a meeting was held on the 25<sup>th</sup> of February 2022 at New Park Springs, near Grimethorpe, involving Mr Gary Oliver, Principal Ecologist with SLR Consulting and Ms Kelly Brindley and Mr James Fleetwood, of TCV. The purpose of the meeting was to explore options for delivering the 8.63 unit shortfall within the reserve.

This was approached from two stand points, firstly to find appropriate receptor sites for the marsh and common spotted orchids, resulting in the delivery of some biodiversity credits, and to find appropriate opportunities to enhance other habitats, in order to deliver the remaining credits.

A number of orchid receptor sites were selected, as illustrated in Drawing 1, and summarised overleaf:

Orchid Receptor Area 1 lies at OS grid reference SE 41468 07781, and measures 0.17ha in extent (Plate 2). It currently comprises a damp grassy slope, temporarily fed by a blockage within a ditch which forces runoff to overflow a footpath and seep down the adjacent slope (Plate 3). This shall be 'formalised' and made more permanent by hard-blocking the ditch at this point and taking the water through a pipe, beneath the footpath, allowing it to seep down the slope in the same way as it does at present, but allowing the path to remain dry and be fully accessible, as well as delivering a more permanent supply of water to the orchis, ensuring that the ground remains damp and highly suitable. A total of 100 marsh orchids shall be placed within Receptor Area 1.

Orchid Receptor Area 2 is centred at OS grid reference SE 41189 07908, and measures 0.05ha in extent (Plate 4). It is positioned at a bend in the path relatively close to one of the main entrance points into New Park Springs, making it visible by users of the park, from both directions. It is recommended that the common spotted orchids are placed here.

Orchid Receptor Area 3 is centred at OS grid reference SE 41364 07942 and measures 0.12ha (Plate 5). This area contains a small ditch which flows west, into the adjacent quarry. The pipe carrying this small ditch westwards (Plate 6) shall be blocked, causing ground water levels to the east to rise, making the area more suitable for marsh orchids; 75 marsh orchids shall be placed here.

Orchid Receptor Area 4 consists of a 2 metres wide x 180 metre long damp/ wet channel on relatively flat ground, centred at OS grid reference SE 41483 07582 (Plate 7). This 0.036ha channel shall receive the remainder of the march orchids, expected to be approximately 75 spikes, based on 2021 count.

The preparation works to Receptor Sites 1 and 3 shall be carried out during 2022, and the orchid spikes themselves shall be transferred during the spring of 2023.

The works described above will result in the enhancement of 0.376ha of grassland, from a sward of poor condition to one of good condition, resulting in the delivery of 3.83 biodiversity units, from a baseline of 1.73 units (an increase of 2.1 biodiversity units).



Plate 2: View of Orchid Receptor Area 1 (0.17ha), due to receive 100 marsh orchids.



Plate 3: View of overflow feeding Orchid Receptor Area 1 (0.17ha), due to be 'formalised' and made permanent.



Plate 4: View of Receptor Area 2 (to the right of the footpath), due to receive common spotted orchids.



Plate 5: View of Receptor Area 3 (0.12ha), due to receive 75 marsh orchids.



Plate 6: Small drainage pipe, to be blocked, raising the water table marginally, in order to make Receptor Area 3 more suitable for marsh orchids.



Plate 7: Receptor Area 4, a 180 metre long ditch on fairly level ground, due to receive circa 75 marsh orchids.

In terms of other enhancements at New Park Springs, three areas of native shrub planting shall take place within species-poor grassland, as illustrated in Drawing 1. Planting here shall comprise hawthorn, blackthorn, dog rose (*Rosa canina*), hazel, and elder (*Sambucus nigra*).

The most northerly of these areas (centred on OS grid reference SE 41598 07765) shall have a footprint of 0.155ha, the central area, located at OS grid reference SE 41557 07583, shall have a footprint of 0.096ha and the most southerly area, located at OS grid reference SE 41494 07507, with a footprint of 0.161ha, resulting in 0.412ha of scrub planting overall.

As seen in Appendix 4, this shall deliver 4.55 biodiversity units, from a baseline of 1.90 units, an increase of 2.65 biodiversity units.

The remaining 3.88 biodiversity units shall be delivered by removing dense young conifer plantations from a 0.49ha area, centred at OS grid reference SE 41215 07633, and identified in Drawing 1, and replacing this with mixed scrub (the same species mix as proposed above). The smaller branches and needles from the felled conifer trees would be chipped on site, whereas the larger sections of log would be used to create log piles, some with voids in their centre with access points at ground level. These log piles would be suitable for invertebrates and provide refuges for species such as hedgehog. This would deliver the required 3.88 biodiversity units, achieving no net loss overall, in fact a marginal increase of 0.58% in overall biodiversity units is predicted.

## 2.2 Clarification on Extent of Hedgerow Loss/ Gain

As described above, and set out in the attached BNG assessment (Appendix 4), there will be an overall net increase in hedgerow length, and value. In its current state, the site supports 570 linear metres of hedgerow; a further 138 linear metres will be planted, as illustrated in the Detailed Landscape Proposals (Appendix 5). In BNG terms, there will be an increase in hedgerow units of 0.59 units, from 2.82 to 3.41, equating to an increase in value of over 21%.

## 2.3 Results of Further Bat Monitoring Surveys

Further bat commuting surveys during the Spring and Summer of 2021 confirmed that only moderate levels of bat activity was present, involving mainly common pipistrelle. On each occasion surveyors were placed on opposite hedgerows (one on the western hedgerow, and one on the eastern). It can be confirmed that no commuting activity, from houses to the north, towards wetland habitat further south, was recorded.

## 2.4 Results of Water Vole Survey of Flat Moor Dyke

This ditch, located approximately 15 metres to the south-east of the site had been recently dredged in 2021, and the banks were entirely bare as a result (refer to Plate 8). As such, the ditch was not suitable for water vole at that time, and a search did not reveal any field signs. In any case, this ditch shall not be affected by the proposals, and therefore should water vole colonise Flat Moor Dyke at some point in the future, they will be unaffected.

## 2.5 Results of Great Crested Newt eDNA Surveys

Great crested newt (GCN) eDNA surveys were carried out during the Spring of 2021, in accordance with standard protocols. Pond P1, located a short distance to the south-east of the site, tested negative for traces of DNA (Appendix 7); Flat Moor Dyke yielded an 'indeterminate' result on two occasions, due to precipitate in the water, but was noted to contain a large number of sticklebacks, making it generally unsuitable for GCN. The other ponds

referred to by Wildcare in their correspondence were searched for but found to be either dry, or simply no longer present. Great crested newt, therefore, does not pose a potential constraint to development.



Plate 8: Flat Moor Dyke (looking north towards Phase 2 of the Barnburgh Lane development) taken in June 2021

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## DRAWING 1

### Proposed Ecological Enhancements to New Park Springs

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408000

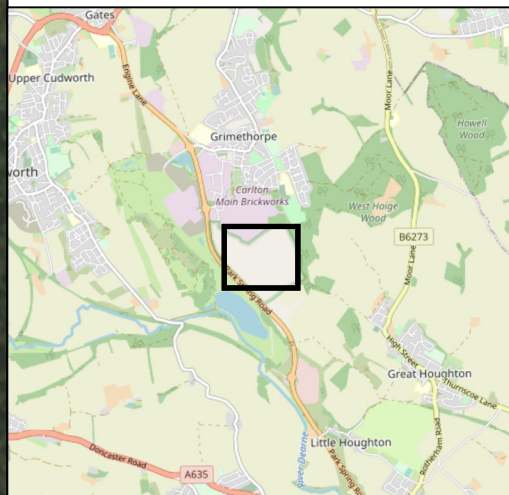
407800

03044.00237.0003.0 Proposed Ecological Enhancements to New Park Springs



**LEGEND**

- Orchid Receptor Area
- Conifer Woodland Removal, Being Replaced With Mixed Scrub
- Proposed Mixed Shrub Planting



*homes by*  
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BARNBURGH LANE 3, GOLDTHORPE

PROPOSED ECOLOGICAL ENHANCEMENTS TO 'NEW PARK SPRINGS'

**DRAWING 1**

Scale 1:2,500 @ A3	Date MAY 2022
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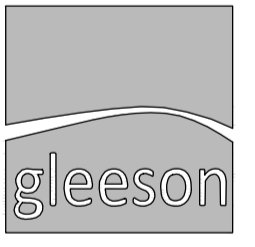
## APPENDIX 1

### Proposed Site Layout



- Existing tree to be removed
- Existing tree to be retained and protected during construction to British Standard BS:1991.
- Areas of new tree planting see schedule for species. All proposed trees to be min 3.0m from the highway.
- New shrubs/ground cover planting
- Grass to front garden
- Paving slab access paths to level threshold for principle entrance. Gradient not to exceed 1 in 12 for maximum 5.00m length
- 5.W. boarded vertical screen fence 1.80m high (100 x 22mm boards with 22mm gaps, 3No. 75 x 50mm rails, 100 x 100mm posts @ 1.875m centres).
- Plot division fence, 1.20m high timber.
- House type code reference number
- Plot number
- Garages location.
- Parking bays
- Show house & Sales office
- Affordable Units

HOUSE TYPE code	type	no
<b>Affordable</b>		
250	2 bed semi det	4
350	3 bed detached	2
351	3 bed semi det	1
<b>Market Sale</b>		
202	2 bed semi det	4
250	2 bed semi det	3
254	2 bed det bungalow	2
339	3 bed semi det	3
350	3 bed detached	7
353	3 bed semi det	10
357	3 bed semi det	5
358	3 bed detached	2
359	3 bed detached	4
360	3 bed detached	6
401	4 bed detached	8
435	4 bed detached	4
436	4 bed detached	3
<b>TOTAL</b>		<b>68</b>



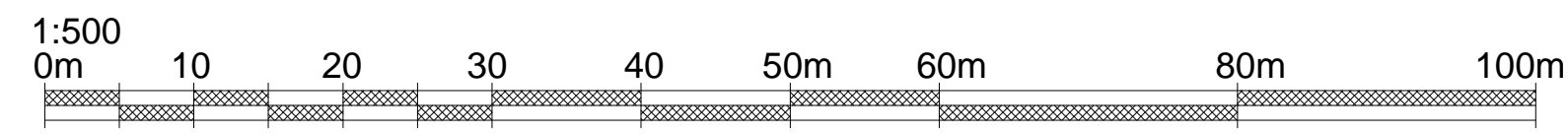
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**BARNBURGH LANE GOLDTHORPE Ph.3**

**- NOT FOR USE ON SITE -  
 PROVISIONAL LAYOUT DRAWING,  
 SUBJECT TO PLANNING APPROVAL**

**planning layout  
 GLEESON  
 HOMES & REGENERATION**

Rev	Description	Date	Scale
01	Continued - position. Plots 27-33 revised. Plots 16 & 47 type changed to introduced type 254 bungalow, turning heads revised, 700mm head margin shown to sloped space roads. 12.11.21	12.11.21	1:500 at A1
02	Pump station repositioned. Road service margins added. Ditch note revised. All proposed trees to be Min 3.0m from highway. 29.11.21	29.11.21	
03	Scheme re-design. 08.04.22	08.04.22	
04	Existing sewer surveyed position shown, plots 93-62 revised to suit. 09.06.20	09.06.20	
05	Plots 11-19 revised reduction of one plot and the rest of the development re-numbered. Road adj to P 57 shortened and 62-65 moved towards access road. Shared surface re-positioned adj P18/19. 15.09.20	15.09.20	
06	Plots 29-26 revised to accommodate proposed Footpath, turning head Adj P22 revised. Garages to 2 bed units omitted plots 5, 19, 20, 22, 23, 24, 28, 29, 65, 66, 67. 21.04.21	21.04.21	
07	Circular Adj P41 removed. Footway at speed ramps revised. On street visitors parking Adj P5 & 6 repositioned to turning heads. Plots 27 & 29 omitted, drivers revised. 15.09.20	15.09.20	
08	Garage to P26 moved forward, paired with P25 garage to avoid proposed sewer. 19.10.20	19.10.20	
09	parking provision increased across the development, minor adjustment to house/ garage -		



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## APPENDIX 2

Comments from Wildscapes dated 19<sup>th</sup> April 2021



19 April 2021

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E: [info@wildscapes.co.uk](mailto:info@wildscapes.co.uk)  
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Dear Mr Mayne

**Project Reference: 2020/1439**

**Site: Barnburgh Lane, Goldthorpe (phase 3)**

**Appraisal of Ecology and Biodiversity Net Gain information provided by SLR Consulting**

Wildscapes CIC Ltd have been appointed to provide an independent appraisal of the Ecological information and Biodiversity Net Gain calculations provided by **SLR Consulting**. This document has been prepared by Dr Nicola Rivers, MCIEEM Natural England Bat Survey Licence holder (Level 2016-24870-CLS-CLS), Paul Liptrot Ecology Manager Class 4 Bat licence (2018-37087-CLS-CLS) and Class 1 GCN survey Licence (2015-16847-CLS-CLS) and Julie Riley Senior Ecologist ACIEEM FISC4.

All appraisals are based on a paperwork exercise only; Wildscapes CIC Ltd have not conducted site visits to assess the veracity of the information provided within any of the independent reports. As such our appraisals are restricted to the information provided in backing documentation for the site. If there are gaps in the information provided these will be identified in the appraisal and where possible potential solutions recommended. Table 1 includes a list of the documentation provided for this appraisal.

**Table 1 Site specific information provided for this appraisal**

Title	Type	Author	Date
Ecological Impact Assessment (Land off West Moor Croft Road, Goldthorpe – Phase 3) V.2	Report	SLR Consulting	October 2020
Location Plan	Plan	Unknown	Unknown
Planning Layout	Plan	Richard Ward Design	13/03/2020
Design and Access Statement	Report	Airedon Planning & Design	December 2020

All of the analysis included within this document is based upon interpretation of the latest version of the metric 2.0 model used for the calculations applied within the Environmental Dimension Partnership Ltd (EDP) Biodiversity Net Gain metric.

### **Biodiversity Net Gain**

**No Biodiversity Net Gain metric has been referred to or provided for either the baseline habitats or post-development habitats, and no post-development landscaping/habitat plan or management plan has been provided. Therefore, no net loss/net gain cannot be calculated or assessed at the moment.** It is worth noting that the Dearne Valley NIA is an area of strategic significance.

### **General comments**

We are satisfied with the qualifications and experience of the ecological surveyors.

The EclA report recognises that the site lies within the Dearne Valley Green Heart Nature Improvement Area. The report references relevant Barnsley policies relating to the environment and the Barnsley Biodiversity Action Plan, but does not reference the adopted Local Plan policy for the site, which states that ***“The development will be expected to retain, enhance and manage hedgerows, woodland and swamp at the southwest side of site”***.

A data search was undertaken from the Barnsley Biological Records Centre and Doncaster Local Records Centre; however, data does not appear to have been sought from the South Yorkshire Bat Group or from the South Yorkshire Badger Group which we would recommend.

### **Hedgerows**

Hedgerows have been identified as a habitat of principal importance in the EclA. The hedgerows have not been assessed under the Hedgerow Regulations 1997 and we recommend this is carried out as at least some of the hedgerows meet the criteria:

*These Regulations apply to any hedgerow growing in, or adjacent to, any common land, protected land, or land used for agriculture, forestry or the breeding or keeping of horses, ponies or donkeys, if—*  
*(a) it has a continuous length of, or exceeding, 20 metres; or*  
*(b) it has a continuous length of less than 20 metres and, at each end, meets (whether by intersection or junction) another hedgerow.*

**We do not think that the Layout plan clearly shows retention of hedgerows along the western boundary (H3 & H4) or the north-eastern diagonal boundary (H5), in fact these appear to have been removed.** This is contrary to the adopted policy for the site and to the wording in Section 4.2.1 of the EclA. We recommend a landscaping plan is produced that clearly shows how retained vegetation is being incorporated into the development.

The species-rich hedgerow along the eastern boundary (H2) looks as if it is being retained. However, the Layout plan does not show that the hedgerow is being buffered from the development, particularly around plots 1, 10, 11, 15-22, 23 where the garden boundary lines appear to run up to and include portions of the hedgerow. This would result in the majority of the hedgerow being under the control of individual householders with a resultant risk of degradation of the feature. **We recommend that it should not form part of the garden curtilages so that it can be appropriately managed. Similarly, the southern boundary hedgerow (H1) is partially within the curtilage of plots 23-26.**

### **Marshy grassland**

The small marshy grassland area to the south has been assessed as having local ecological importance, including a number of common plants with a preference for waterlogged soil, and good numbers of southern marsh orchid and common spotted orchid. The EclA suggests translocating the soil to the marshland areas to the south/southeast of the site or to the Adwick Washlands RSPB Reserve, rather than retaining the marshy grassland area within the current development proposals.

We would prefer to see the marshy grassland area to the south of the site retained, particularly as it provides a link between hedgerows, provides continuity with the marshy grassland to the south, and was the main area where the small amount of bat activity was recorded. Retention of swamp on the south-west side of the area (what is now Site 2) formed part of the adopted Local Plan site policy for this site (HS45) – from aerial photographs this appears to have been removed so it is appropriate to retain this area of marshy grassland instead. When assessing BNG, it would also be beneficial to retain this habitat.

### Other habitats

Small areas of species-rich semi improved grassland and extensive areas of tall herb (ruderal) communities were assessed as having local ecological importance. We agree that it would be difficult to retain these areas and that there will be a net loss to biodiversity by removing this habitat. If the marshy grassland is retained, it could be enhanced to provide some of the ecological function of the grassland and tall herb areas through appropriate native planting.

### Impact on Adwick Washlands

Adwick Washlands RSPB Reserve lies 400m to the south. This site is scheduled to achieve SSSI status within the next year, which will make it a Statutory Designated Site. We concur that direct construction related impacts are unlikely to occur, and that any increase in visitor numbers from increased local residential units is unlikely to significantly impact the reserve. However Natural England, the RSPB and Yorkshire Wildlife Trust who have detailed knowledge of the site should be consulted and may be provide additional information.

However, a review of satellite imagery shows that the site may be functionally linked to the reserve, via the network of drains, in particular Far Moor Dike. This appears to be linked to Site 2 to the east/southeast of Site 3; as the southern portion of Site 3 has wetland characteristics, it is possible that water will drain through to the dike.

**There does not appear to be a CEMP provided on the planning portal – this should be provided and show how groundwater will be protected from contamination.**

### Reptiles

A reptile survey was undertaken which followed an appropriate methodology, although surveying was compressed into late August to late September. We accept that reptiles are unlikely to be present on site.

### Bats

**The site assessment has not made clear whether the site is considered to be of ‘low’, ‘moderate’ or ‘high’ suitability to commuting and foraging bats. We would like this to be clarified please with appropriate justification.** The level of suitability informs the level of survey required. In the Bat Conservation Trust Survey Guidelines<sup>1</sup>, Table 8.3 recommends **one survey per month** – April-Oct (transects *and* static detector surveys) for sites offering moderate suitability for foraging and commuting bats and **one survey per season** (transects *and* static detector surveys) for low suitability sites. Seasons are spring (April-May), summer (June/July/August) and autumn (Sep/Oct).

**However, in this report only two activity surveys have been undertaken** – one in August and one in September, both lower than the guidelines for low and moderate suitability sites *and* which miss the period of maternity roosts (core breeding period).

The desktop study (which did not include a data search from SY Bat Group) returned a roosts records for the noctule and common pipistrelle. The noctule bat is considered to be uncommon but widespread in South Yorkshire<sup>2</sup>. The surveys undertaken recorded activity for both common pipistrelle and noctule bat, as well as activity from soprano pipistrelle and *Myotis* species. It is not possible to determine the site’s value for these species as the survey information for the core breeding period as not been provided (i.e. May to July). Activity surveys are designed to highlight if a site is valuable for

---

<sup>1</sup> Collins, J., ed., 2016. *Bat surveys for Professional Ecologist; Good Practice Guidance*. London: BCT.

<sup>2</sup> G. Slack, South Yorkshire Bat Status, 2019. Northern Bats Volume 4

foraging and commuting bats throughout their annual cycle or at selected times of the year (spring transitional, maternity period, autumn transitional period etc). Some of the proposed habitats (gardens) will likely be used by foraging and commuting bats but the impact of artificial lighting and habitat change will likely restrict certain species. **It is not possible to evaluate the impact with the current information. Further activity surveys in line with the bat survey guidelines are recommended.**

#### **Water Vole**

We note that a number of records for water vole were returned in the data search undertaken by SLR. The SLR ecologist has identified a “well vegetated ditch” (Far Moor Dike) 15m to the south-east of the site, with an area of marshland and open water 30m to the south-east of the site. These have been assessed as having local ecological importance along with adjoining areas of marshy grassland.

Water vole have been scoped out of further assessment based on the lack of suitable features within the development site itself. We advise that the well-vegetated ditch referred to in the EclA report (Far Moor Dike) and the area of open water should be checked for signs of water vole as they are in close proximity to the site, and intentional or reckless damage or disturbance is an offence under the Wildlife and Countryside Act 1981 (Schedule 5).

#### **Great Crested Newts**

**The eDNA sampling was undertaken on 26<sup>th</sup> August which is outside the recommended survey window (15<sup>th</sup> April to 30<sup>th</sup> June)<sup>3</sup>. As such it is currently not possible to confirm the status of the site for great crested newts.**

We agree that the sampling was undertaken by a suitable qualified licensed surveyor. We note, but disagree with SLR comments that they consider the survey results to be robust and that great crested newt’s efts/young remain in the ponds until September.

The great crest newt breeding season peaks between March to May, and during this time adult great crested newts are in the pond and pools<sup>4</sup>. Typically, the breeding season starts in mid-February and extends to mid-June, however this is weather dependent and can vary depending on geographical location (i.e., at northern latitudes, season may start later and be shorter due to environmental constraints). The report references the GCN mitigation guidelines which uses central England as a reference, however the proposed development site is north of this location. Most eggs are laid within the Mid-April to Mid-May period with laying continuing until late June at a much-reduced rate. The larvae can persist in ponds until late September, however the number of larvae within the ponds will decrease rapidly from end of July to early August. DNA that is released into the environment is likely to be broken down and lost by the action of UV light and microbial activity over a period of around 2 to 4 weeks<sup>5, 6</sup>. Thus, reducing the detectability of DNA in the water samples. This will likely be

---

<sup>3</sup> Biggs J, Ewald N, Valentini A, Gaboriaud C, Griffiths RA, Foster J, Wilkinson J, Arnett A, Williams P and Dunn F 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.

<sup>4</sup> Langton, T. E. S., C. L. Beckett, and J. P. Foster 2001 Great crested newt handbook, Froglife. Halesworth.

<sup>5</sup> Dejean T., A. Valentini, C. Miquel, P. Taberlet, E. Bellemain, and C. Miaud. 2012 Improved detection of an alien invasive species through environmental DNA barcoding: the example of the American bullfrog *Lithobates catesbeianus* J. Appl. Ecology 49:953-959.

<sup>6</sup> Thomsen, P. F., J. Kielgast L. L. Iversen, C. Wiuf, M. Rasmussen M. T. P. Gilbert, et al. 2012b. Monitoring endangered freshwater biodiversity using environmental DNA. Mol. Ecol.

exacerbated if a low population is present (i.e., overall, the amount of DNA present in the water column would be reduced with a low population) or if weather and other environmental conditions restricted the length of the breeding period or increased the degradation rate (i.e. shade level, warm weather). Therefore, it is possible that the sample could have returned a false negative. **As such we would recommend that further eDNA sampling are collected and analyzed inline the Biggs et al (2014). Also, Satellite imaging and OS maps<sup>7</sup> of the site suggests that additional ponds are present close to the site (SE 46742 03552 and SE 46715 03523). It is understood that one of these ephemeral ponds was previously found to support at least one great crested newt. We would recommend that they are included in further eDNA sampling and/or assessments for a robust assessment of the population.**

### **Birds**

We concur with the assessment of the site as having less than local importance for ground breeding birds. We agree that common bird species are likely to nest in the scrub and hedgerows, but there is sufficient similar scrub habitat nearby to provide nesting opportunities, and if hedgerows are retained and suitably buffered from the residential areas, they should continue to provide nesting and foraging opportunities.

We agree with the concept of including built-in bird boxes which need to be suitably placed to be the most useful to the target species of swift, house sparrow and starling.

### **Hedgehog and other species**

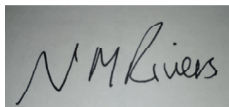
We concur with the assessment of the site as having some importance for hedgehog and recommend that the post-development hedgehog highway idea is adopted. If the hedgerows are buffered from development, then hedgehogs will likely use them as a route in and out of the site.

We agree that the likelihood of the site supporting badger and otter is low.

Without specialist surveying it is difficult to assess the overall importance of the site for invertebrates, but we agree that the site having less than local importance is probably correct.

I trust the above meets with your requirements, please feel free to contact me should you require any further information.

Yours sincerely  
For and on behalf of Wildscapes



Dr Nicola Rivers, MCIEEM

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<sup>7</sup> Magic Map 2021. MAGIC online mapping application.

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## APPENDIX 3

### Results of Extended Phase I Habitat Survey (June 2020)



LEGEND	
	SITE BOUNDARY
	INTACT SPECIES-POOR HEDGEROW
	INTACT NON-NATIVE HEDGEROW
	FENCE
	SCATTERED SCRUB
	BRAMBLE DOMINANT HABITAT
	TALL HERB DOMINANT HABITAT
	MARSHY GRASSLAND
	SEMI-IMPROVED NEUTRAL GRASSLAND
	POOR SEMI-IMPROVED GRASSLAND
	HEDGEROW REFERENCE
	TARGET NOTE



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LAND OFF WEST MOOR CROFT RD,  
 GOLDTHORPE  
 ECOLOGICAL IMPACT ASSESSMENT  
 (EcIA)  
 EXTENDED PHASE 1 HABITAT  
 SURVEY  
**DRAWING 1**

Scale: 1:1000 @ A3 Date: JUNE 2020

424\_03044\_00168.27.001.0 Ex Ph 1 Hb Svy.dwg

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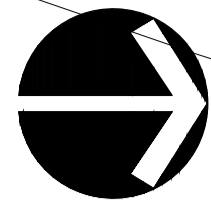
## APPENDIX 4

Metric 3.0 BNG Assessment (supplied separately in Excel format)

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## APPENDIX 5

### Detailed Landscape Proposals



This drawing is the copyright of Rosetta Landscape Design and cannot be reproduced in any form without the express consent of the company. Written and scaled dimensions to be checked on site, any discrepancies reported prior to work commencing. **If in doubt please ask.**

This drawing has been prepared for the purpose of planning approval.

Proposed Native Hedge Mix 1 (4.00/m)

Nr	Code	Plant Name	Ht(cm)	Root	Cntr(l)	Mix(%)
30	Ac	Acer campestre	80-100	B		5.00
123	Cav	Corylus avellana	80-100	B		20.00
183	Cm	Crataegus monogyna	80-100	B		30.00
60	la	Ilex aquifolium	80-100	C	5	10.00
123	Ps	Prunus spinosa	80-100	B		20.00
60	Sc	Salix caprea	80-100	B		10.00
30	Vo	Viburnum opulus	80-100	B		5.00

Proposed Shrubs

Nr	Code	Plant Name	Ht(cm)	Root	Cntr(l)	Nr/m <sup>2</sup>
28	BIA	Berberis thunbergii 'Atropurpurea'	45-60	C	5	3.00
63	BrS	Brachyglottis 'Sunshine'	30-40	C	5	3.00
82	CIS	Choisya ternata 'Sundance'	30-40	C	5	3.00
23	EIEG	Euonymus fortunei 'Emerald 'n' Gold'	15-30	C	5	5.00
100	EIE	Euonymus fortunei 'Emerald Gaiety'	15-30	C	5	5.00
51	HpS	Hebe pinguifolia 'Sutherlandii'	30-40	C	5	4.00
9	Hca	Hypericum calycinum	45-60	C	5	4.00
42	LaH	Lavandula angustifolia 'Hidcote'	30-40	C	5	4.00
48	LnBG	Lonicera nitida 'Baggesen's Gold'	30-40	C	5	4.00
31	LnMG	Lonicera nitida 'May Green'	30-40	C	5	3.00
26	Vd	Viburnum davidii	30-40	C	5	3.00
25	Vt	Viburnum tinus	40-60	C	5	3.00
57	Vmi	Vinca minor	15-20	C	5	4.00



Planting Notes

**Topsoil** shall be a minimum of 400mm depth over planting beds and graded to fall. Imported topsoil must be BS3882:2007 compliant and existing topsoil must be cultivated in accordance with BS3882:2007. No cultivation should take place in wet/waterlogged conditions.

**Herbicide and cultivation:** Topsoil to be treated with two applications of herbicide prior to planting, where necessary, strictly in accordance with the Control of Pesticides Regulations 1986 (as amended 1997 or otherwise, updated/superseded legislation) and following manufacturer's instructions by qualified staff. The topsoil shall then be cultivated to 150mm depth.

**Planting:** All planting and turfing shall conform to BS: 3936: 1992 and BS:4428:1989. **Trees:** Standard trees to be planted in pits 800x800x450mm or dimensions of rootball, whichever is greater. Tree to be supported by 1Nr stake (1500mm long, per tree, 600mm above ground, 75mm diameter) and 1Nr bio-degradable tie. AlignKey soil improver and 150g Enmag (or, equivalent) to be incorporated into the soil of all new tree pits. Trees to be planted centrally within a tree pit.

**Container grown shrubs, transplants and whips:** Shrubs and transplants shall be planted in pits 300x300x400mm depth, and the backfill shall include 3 litres of peat-free tree and shrub compost. Where two or more shrub species are indicated within a single bed each species shall be randomly mixed throughout the bed in groups of 3/5.

**Native hedge:** To be planted as a double row. **Herbicide:** Spot treat with herbicide throughout the maintenance period in accordance with the manufacturer's instructions.

**Mulch:** Planting beds to receive 75mm depth pulverized ornamental bark mulch. Native woodland/edge plants to be planted with 800g flax fibre mulch mat pinned to soil. Native hedgerow to be planted through 800g flax fibre mulch roll, edges tucked. Ensure the top of the mulch layer is a minimum of 15mm below adjacent pavements and other surfaces, to prevent spillage.

**Plant position:** Final position of trees and shrubs subject to confirmation of service location and approval of statutory undertakers.

**Grass:** All turf/seeded areas to be cultivated and levelled as required removing any stones, rubble, subsoil, general construction waste.

**Planting Season:** Bare-root plants to be planted between mid-November and mid-March dependant upon the planting season.

LEGEND

	Existing tree to be retained		Proposed tree Standard
	Existing tree to be removed		Proposed tree Standard (Light)
	Existing tree (to be trimmed back)		Proposed shrub bed
	Existing hedge to be retained		Proposed grass
	Existing hedge to be trimmed back		Proposed native hedge mix

Proposed Trees

Nr	Code	Plant Name	Form	Ht(cm)	Girth(cm)	CStm(cm)	Root
4	Ac	Acer campestre	Standard	250-300	8-10	175-200	B
6	Al	Amelanchier lamarckii	Standard (Light)	250-300	6-8	150-175	B
5	Bp	Betula pendula	Standard	250-300	8-10	175-200	B
6	MJD	Malus 'John Downie'	Standard (Light)	250-300	6-8	150-175	B
3	Sar	Sorbus aria	Standard	250-300	8-10	175-200	B
4	Sau	Sorbus aucuparia	Standard	250-300	8-10	175-200	B

Rev B: Revised to 1014/JJ, received 11Apr22 - 21Apr22 (MP/jr)

Rev A: Revised to 1014/3C received 14Oct20 - 15Oct20 (MP/jr)

Base: Richard Ward Design, 'Planning Layout', 1014/3B

PROJECT Barnburgh View, Goldthorpe Ph 3

TITLE Detailed Landscape Proposals (1 of 2)

CLIENT Gleeson Homes and Regeneration

DATE 05 Oct 20 SCALE 1 : 250 SHEET A1

DRAWN MP/jr DRAWING NO 3627/2

CHECKED MP REVISION B

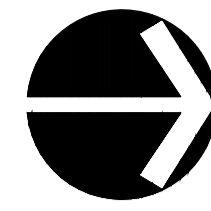


Chartered Landscape Architects

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This drawing has been prepared for the purpose of planning approval.



**Planting Notes**

**Topsoil** shall be a minimum of 400mm depth over planting beds and graded to fall. Imported topsoil must be BS3882:2007 compliant and existing topsoil must be cultivated in accordance with BS3882:2007. No cultivation should take place in wet/waterlogged conditions.

**Herbicide and cultivation:** Topsoil to be treated with two applications of herbicide prior to planting, where necessary, strictly in accordance with the Control of Pesticides Regulations 1986 (as amended 1997 or otherwise, updated/superseded legislation) and following manufacturer's instructions by qualified staff. The topsoil shall than be cultivated to 150mm depth.

**Planting:** All planting and turfing shall conform to BS: 3936: 1992 and BS:4428:1989.

**Trees:** Standard trees to be planted in pits 800x800x450mm or dimensions of rootball, whichever is greater. Tree to be supported by 1N1r stake (1500mm long, per tree, 600mm above ground, 75mm diameter) and 1N1r bio-degradable tie. Alignure soil improver and 150g Enmag (or equivalent) to be incorporated into the soil of all new tree pits. Trees to be planted centrally within a tree pit.

**Container grown shrubs, transplants and whips:** Shrubs and transplants shall be planted in pits 300x300x400mm depth, and the backfill shall include 3 litres of peat-free tree and shrub compost. Where two or more shrub species are indicated within a single bed each species shall be randomly mixed throughout the bed in groups of 3/5.

**Native hedge:** To be planted as a double row.

**Herbicide:** Spot treat with herbicide throughout the maintenance period in accordance with the manufacturer's instructions.

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**Plant position:** Final position of trees and shrubs subject to confirmation of service location and approval of statutory undertakers.

**Grass:** All turfseeded areas to be cultivated and levelled as required removing any stones, rubble, subsoil, general construction waste.

**Planting Season:** Bare-root plants to be planted between mid-November and mid-March dependant upon the planting season.

**LEGEND**

	Existing tree to be retained		Existing hedge to be retained		Proposed tree Standard (Light)		Proposed native hedge mix
	Existing tree to be removed		Existing hedge to be trimmed back		Proposed shrub bed		Proposed grass
	Existing tree (to be trimmed back)		Proposed tree Standard				

**Plant Codes (full schedules on Sheet 1)**

Code	Plant Name
Ac	Acer campestre
Al	Amelanchier lamarckii
BIA	Berberis thunbergii 'Atropurpurea'
Bp	Betula pendula
BrS	Brachyglottis 'Sunshine'
CIS	Choisya ternata 'Sundance'
Cav	Corylus avellana
Cm	Crataegus monogyna
EIEG	Euonymus fortunei 'Emerald 'n' Gold'
EIE	Euonymus fortunei 'Emerald Gaiety'
HpS	Hebe pinguifolia 'Sutherlandii'
Hca	Hypericum calycinum
la	Ilex aquifolium
LaH	Lavandula angustifolia 'Hidcote'
LnBG	Lonicera nitida 'Baggesen's Gold'
LnMG	Lonicera nitida 'May Green'
MJD	Malus 'John Downie'
Ps	Prunus spinosa
Sc	Salix caprea
Sar	Sorbus aria
Sau	Sorbus aucuparia
Vd	Viburnum davidii
Vo	Viburnum opulus
Vt	Viburnum tinus
Vmi	Vinca minor

PROJECT	Barnburgh View, Goldthorpe Ph 3		
TITLE	Detailed Landscape Proposals (2 of 2)		
CLIENT	Gleeson Homes and Regeneration		
DATE	05 Oct 20	SCALE 1 : 250	SHEET A0
DRAWN	MP/jr	DRAWING NO	3627/3
CHECKED	MP	REVISION	B

Rev B: Revised to 1014/3J, received 11Apr22 - 21 Apr22 (MP/jr)

Rev A: Revised to 1014/3C received 14Oct20 - 15Oct20 (MP/jr)

Base: Richard Ward Design, 'Planning Layout', 1014/3B



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## APPENDIX 6

Correspondence from Hannah Andrew of Barnsley Council confirming  
No Net Loss

We are applying no net loss based on the BIO1 policy and the accompanying targets set out in the SPD:

<https://www.barnsley.gov.uk/media/15708/biodiversity-and-geodiversity-spd.pdf>

I don't think this will change until the Bill is enacted and National Policy adopted.

Kind regards

Hannah

---

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## APPENDIX 7

### Results of Great Crested Newt eDNA Survey

Client: Gary Oliver,  
SLR Consulting Ltd.



ADAS  
Spring Lodge  
172 Chester Road  
Helsby  
WA6 0AR



Tel: 01159 516747  
Email: Helen.Rees@adas.co.uk

www.adas.uk

Sample ID: ADAS-2297                      Condition on Receipt: Medium Sediment                      Volume: Passed  
Client Identifier: Pond 1                      Description: pond water samples in preservative  
Date of Receipt: 10/06/2021                      Material Tested: eDNA from pond water samples

Determinant	Result	Method	Date of Analysis
Inhibition Control <sup>†</sup>	2 of 2	Real Time PCR	11/06/2021
Degradation Control <sup>§</sup>	Within Limits	Real Time PCR	11/06/2021
Great Crested Newt*	0 of 12 (GCN negative)	Real Time PCR	14/06/2021
Negative PCR Control (Nuclease Free Water)	0 of 4	Real Time PCR	As above for GCN
Positive PCR Control (GCN DNA 10 <sup>-4</sup> ng/μL) <sup>#</sup>	4 of 4	Real Time PCR	As above for GCN

Report Prepared by: Dr Helen Rees                      Report Issued by: Dr Ben Maddison

Signed:                       Signed: 

Position: Director: Biotechnology                      Position: MD: Biotechnology

Date of preparation: 15/06/2021                      Date of issue: 15/06/2021

*eDNA analysis was carried out in accordance with the stipulated methodology found in the Technical Advice Note (WC1067 Appendix 5 Technical Advice Note) published by DEFRA and adopted by Natural England.*

*\* If all PCR controls and extraction blanks give the expected results a sample is considered: negative for great crested newt if all of the replicates are negative; positive for great crested newt if one or more of the replicates are positive.*

*<sup>†</sup> Recorded as the number of positive replicate reactions at expected C<sub>t</sub> value. If the expected C<sub>t</sub> value is not achieved, the sample is considered inhibited and is diluted as per the technical advice note prior to amplification with great crested newt primer and probes.*

*<sup>§</sup> No degradation is expected within time frame of kit preparation, sample collection and analysis.*

*<sup>#</sup> Additional positive controls (10<sup>-1</sup>, 10<sup>-2</sup>, 10<sup>-3</sup> ng/μL) are also routinely run, results not shown here.*

Client: Gary Oliver,  
SLR Consulting Ltd.



ADAS  
Spring Lodge  
172 Chester Road  
Helsby  
WA6 0AR



Tel: 01159 516747  
Email: Helen.Rees@adas.co.uk

www.adas.uk

Sample ID: ADAS-2299                      Condition on Receipt: White Precipitate                      Volume: Passed  
Client Identifier: Ditch                      Description: pond water samples in preservative  
Date of Receipt: 10/06/2021                      Material Tested: eDNA from pond water samples

Determinant	Result	Method	Date of Analysis
Inhibition Control <sup>†</sup>	0 of 2	Real Time PCR	11/06/2021
Degradation Control <sup>§</sup>	Evidence of degradation or residual inhibition	Real Time PCR	11/06/2021
Great Crested Newt*	Indeterminate	Real Time PCR	11/06/2021
Negative PCR Control (Nuclease Free Water)	0 of 4	Real Time PCR	As above for GCN
Positive PCR Control (GCN DNA 10 <sup>-4</sup> ng/μL) <sup>#</sup>	4 of 4	Real Time PCR	As above for GCN

Report Prepared by: Dr Helen Rees                      Report Issued by: Dr Ben Maddison

Signed:                       Signed: 

Position: Director: Biotechnology                      Position: MD: Biotechnology

Date of preparation: 15/06/2021                      Date of issue: 15/06/2021

*eDNA analysis was carried out in accordance with the stipulated methodology found in the Technical Advice Note (WC1067 Appendix 5 Technical Advice Note) published by DEFRA and adopted by Natural England.*

*\* If all PCR controls and extraction blanks give the expected results a sample is considered: negative for great crested newt if all of the replicates are negative; positive for great crested newt if one or more of the replicates are positive.*

*<sup>†</sup> Recorded as the number of positive replicate reactions at expected C<sub>t</sub> value. If the expected C<sub>t</sub> value is not achieved, the sample is considered inhibited and is diluted as per the technical advice note prior to amplification with great crested newt primer and probes.*

*<sup>§</sup> No degradation is expected within time frame of kit preparation, sample collection and analysis.*

*<sup>#</sup> Additional positive controls (10<sup>-1</sup>, 10<sup>-2</sup>, 10<sup>-3</sup> ng/μL) are also routinely run, results not shown here.*

## Appendix 1: Interpretation of results

### Sample Condition

Upon sample receipt we score your samples according to quality: good, low sediment, medium sediment, high sediment, white precipitate, and presence of algae.

There are three reasons as to why sediment should be avoided:

1. It is possible for DNA to persist within the sediment for longer than it would if it was floating in the water which could lead to a false positive result i.e. in this case GCN not recently present but present a long time ago
2. In some cases sediment can cause inhibition of the PCR analysis used to detect GCN eDNA within samples which could lead to an indeterminate result.
3. In some cases sediment can interfere with the DNA extraction procedure resulting in poor recovery of the eDNA which in turn can lead to an indeterminate result.

Algae can make the DNA extraction more difficult to perform so if it can be avoided then this is helpful.

Sometimes samples contain a white precipitate which we have found makes the recovery of eDNA very difficult. This precipitate can be present in such high amounts that it interferes with the eDNA extraction process meaning that we cannot recover the degradation control (nor most likely the eDNA itself) at sufficient levels for the control to be within the acceptable limits for the assay, therefore we have to classify these type of samples as indeterminate.

### What do my results mean?

A positive result means that great crested newts are present in the water or have been present in the water in the recent past (eDNA degrades over around 7-21 days).

A negative result means that DNA from the great crested newt has not been detected in your sample.

On occasion an inconclusive result will be issued. This occurs where the DNA from the great crested newt has not been detected but the controls have indicated that either: the sample has been degraded and/or the eDNA was not fully extracted (poor recovery); or the PCR inhibited in some way. This may be due to the water chemistry or may be due to the presence of high levels of sediment in samples which can interfere with the DNA extraction process. A re-test could be performed but a fresh sample would need to be obtained. We have successfully performed re-tests on samples which have had high sediment content on the first collection and low sediment content (through improved sample collection) on the re-test. If water chemistry was the cause of the indeterminate then a re-test would most likely also return an inconclusive result.

The results will be recorded as indeterminate if the GCN result is negative and the degradation result is recorded as:

1. evidence of decay - meaning that the degradation control was outside of accepted limits
2. evidence of degradation or residual inhibition - meaning that the degradation control was outside of accepted limits but that this could have been due to inhibitors not being removed sufficiently by the dilution of inhibited samples (according to the technical advice note)

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