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

Additional Supplementary Ecological Information (SEI) including Revised Biodiversity Net Gain (BNG) assessment of land within New Park Springs

Prepared for Gleeson Homes Limited

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1.0 INTRODUCTION

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), hereafter known as the 'Site'.

An SEI report was produced by SLR Consulting in June 2022[1], and this was subsequently reviewed and commented on by Ms Katie Lawrence, Planning Ecologist with Barnsley Council, in an email dated 30th June 2022.

A further SEI report was subsequently produced by SLR Consulting in August 2022[2], and this again was reviewed and commented upon by Ms Katie Lawrence, Planning Ecologist with Barnsley Council, in an email dated 25th of August 2022

The comments from Ms Lawrence, dated 25th of August 2022, are provided below:

- Following my last consultation response, the updated ecology report includes a data search undertaken with South Yorkshire Bat Group and South Yorkshire Badger Group and further detail regarding protected species surveys undertaken on site, which is welcomed. I am now satisfied with the results of the water vole, great crested newt and bat transect surveys carried out;
- Further detail requested on the findings of Hedgerow Regulations (1997) surveys has not been provided. As set out within my last consultation response, correspondence held between myself and the applicant's ecologist sent on the 10th March 2022 advised that none of the hedgerows on site meet such criteria. Further information as to why this is the case should be included within the report;
- Within section 3.1 of the report, the condition assessment detailed for tall ruderal habitats on site indicate that 3 of the condition assessment criteria have been passed. On this basis, the tall ruderal habitat should be of a good condition, when referring to the condition sheet for urban habitat types within the Biodiversity Metric 3.1 Technical Supplement; however, the report states that this habitat is of fairly good condition. Justification should be provided as to why the condition 'fairly good' has been used, as this differs from condition assessments within the Technical Supplement;
- The landscape proposals (Detailed Landscape Proposal (2 of 2) drawing no. 3627/3) show retained hedgerows on site. The metric sets out that all lengths of hedgerow will be retained on site; however, the landscape proposals appear to show a section of hedgerow to the north-western corner of the site to be removed. This should be confirmed and if proposed for removal, the metric should be amended accordingly.
- Details of how condition assessments of on-site baseline habitats have been determined are included within section 3.1 of the report; however, condition assessment information has not been provided for off-site baseline habitats. This was requested in my previous consultation response and the report should be amended accordingly.
- The proposals site is located within the Dearne Valley Green Heart Nature Improvement Area, therefore all baseline habitats and proposed habitats on site should be included within an area formally identified in local strategy under strategic significance within the metric; this is with exception to areas proposed as developed land; sealed surface, which are of no value and this multiplier will not have an effect. The off-

[1] SLR Consulting (June 2022). SEI including revised BNG of New Park Springs v1 (SLR ref 424.03044.00237)

[2] SLR Consulting (August 2022). Further SEI including revised BNG of New Park Springs v1 (SLR ref 424.03044.00237)

site mitigation site (New Park Springs) is also located within the Dearne Valley Green Heart Nature Improvement Area, so the strategic significance should also be altered on the off-site baseline and off-site habitat creation/enhancement tabs to "formally identified in local strategy". This amendment does not affect the total net change in biodiversity but is representative of the situation.

- Towards the end of section 3.2.2 of the ecology report, it is advised that areas of other neutral grassland proposed as mixed scrub habitat equate to 0.412ha (0.095, 0.13, 0.1 and 0.087ha). Within the metric, areas given for the plots proposed for mixed scrub are: 0.095ha, 0.13ha, 0.1ha and 0.412ha (gives a total of 0.737ha). The areas proposed for mixed scrub should be confirmed and the report or metric amended accordingly. Drawing 1 (Proposed Ecological Enhancements to New Park Sprigs) included within the report indicates that the four plots will equate to an area of 2.05ha (scrub planting area 4 shown as 0.87ha instead of more likely 0.087ha). Again, this should be amended.
- Mixed scrub proposed on other neutral grassland as off-site mitigation is still classed as a habitat enhancement rather than creation. This is justified in that the grassland beneath will not be damaged and would lead to a gradual transition from one habitat type to another more valuable habitat; however, when referring to box 5 – 3 of the Biodiversity Metric 3.1 User Guide, the proposed mixed scrub planting is not representative of the three situations given as examples of habitat enhancement/restoration (improving the condition of an existing habitat, changing the distinctiveness of a habitat to another higher distinctiveness habitat in the same broad habitat type or restoring a remnant habitat type). Box 5-3 then goes on to advise that in all other habitat change scenarios the baseline habitat should be assumed to be lost and the replacement, post-intervention habitat will be 'created' for the purpose of the metric. I therefore continue to recommend the amendment of the metric, so that mixed scrub planting is proposed as habitat creation rather than enhancement. It is noted that in doing this it causes an overall loss in total habitat units. Consideration should therefore be given to the enhancement of existing grassland habitats to grassland of a higher condition as an alternative, this being representative of habitat enhancement and more likely to satisfy the habitat trading rules. I would reiterate the suggestion in my previous consultation response in that this would ideally be located in association with the orchid translocation areas to provide larger enhanced areas. It is understood that the Land Trust would prefer scrub planting on the site they manage; however, a balance also has to be struck with habitats that are proposed to be lost on the application site.
- The temporal risk multiplier section of the metric remains incomplete for proposed habitat creation/enhancement works proposed on and off-site. As advised within my last consultation response these should be set at 0 unless habitats are to be created/enhanced in advance or will be delayed. Reference should be made to paragraphs 5.39 – 5.46 of the Biodiversity Metric 3.1 User Guide on how to complete this part of the metric.

This 'additional SEI report' seeks to address the points raised by Ms Lawrence, and therefore the outstanding points have been addressed in turn.

2.0 ADDITIONAL INFORMATION

2.1 Hedgerow Regulations Assessment

Ms Katie Lawrence has requested further information on the Hedgerow Regulations Assessment, that was carried out to establish whether any of the on-Site hedgerows meet the criteria of 'ecological importance' under the Hedgerow Regulations 1997.

It can be confirmed that data on the state of the hedgerows was collected by Ms Vanessa Jackson, Senior Field Ecologist with SLR Consulting, on the 22nd of June 2021.

A detailed summery of the findings are provided in the table below; reference should be made to Drawing 1 in terms of hedgerow locations.

From this, it may be seen that none of the hedgerows have sufficient woody species within the relevant 30m lengths, to meet the criteria of importance under the Regulations.

Hedgerow Number	Woody Species	Associated Features	Level of Importance under the Regulations
H1	Blackthorn (40%) Hawthorn (40%) Elder (10%) Field maple (10%)	N/A	Not Important
H2	Blackthorn (50%) Hawthorn (50%)	N/A	Not important
H3	Hawthorn (85%) Elder (15%)	N/A	Not important
H4	Hawthorn (90%) Elder (!0%)	N/A	Not important
H5	Hawthorn (50%) Blackthorn (40%) Elder (10%)	N/A	Not important
H6	Cypress (100%)	N/A	Not important

2.2 Revised Metric 3.1 Baseline

Comments received from Ms Katie Lawrence relating to the condition assessment for tall ruderal habitats have been reviewed. Whilst it is acknowledged that meeting the three criteria within the condition assessment of the Technical Supplement broadly accords with 'good condition', meeting only two of the criteria would equate to a habitat of 'moderate' condition; there are therefore no clear criteria for 'fairly good' condition, even though it exists within the metric. Given this, there appears to be scope for professional judgement and interpretation.

The original EcIA[3] describes the tall ruderal vegetation as follows:

[3] SLR Consulting (October 2020). Ecological Impact Assessment for Goldthorpe 3 v3 (SLR ref 424.03044.00168

"In the north and centre of the Site hogweed was abundant; along the western areas of bramble encroachment common nettle (*Urtica dioica*), creeping thistle (*Cirsium arvense*), great willowherb and common ragwort formed locally extensive stands. In some places rosebay willowherb (*Chamaenerion angustifolium*) was particularly frequent.

Further south the range included occasional teasel (*Dipsacus fullonum*), hoary ragwort (*Jacobaea erucifolia*) and bristly oxtongue (*Helminthotheca echioides*).

At the south-west corner of the Site the tall herb assemblage was locally enriched by the presence of hemlock (*Conium maculatum*), and on the opposite eastern boundary locally frequent Michaelmas daisy (*Aster* sp.) was recorded".

Based on this, it is deemed proportionate and reasonable to allocate the tall ruderal vegetation a condition assessment of 'fairly good'.

As stated by Ms Lawrence, the Site lies within the Dearne Valley Green Heart Nature Improvement Area, and therefore the Strategic significance multiplier has been altered to reflect this (raising the multiplier from 1.0 to 1.15). This raises the baseline value of the application site from 12.16 biodiversity units to 13.98 units.

2.3 Loss of section of Hedgerow in the North-West part of the Site

As stated by Ms Lawrence, a section of hedgerow in the north-western corner of the Site is shown within the Landscape drawings as being removed[4]. The total length of hedgerow to be removed here is approximately 45 metres, and the Metric 3.1 assessment has been adjusted to reflect this (see entry for Hedgerow H4).

Proposals to plant 130m of new native species-rich hedgerow, as described within the previous SEI report and the original EcIA report, shall deliver an overall net increase of over 27% of hedgerow units.

2.4 Biodiversity Off-Setting with New Park Springs

2.4.1 Enlarged Orchid Receptor Areas

Following comments from Ms Katie Lawrence to increase the size of the orchid receptor sites, these have been enlarged slightly from that described in the earlier report, where deemed feasible, as summarised below:

Orchid Receptor Area 1 lies at OS grid reference SE 41468 07781, and now measures 0.40 ha in extent (Plate 1). 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 2). 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 now measure 0.1ha in extent (Plate 3). 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

[4] Rosetta Landscape Design Drawing Number 3627/3: Detailed Landscape Proposals for Goldthorpe Phase 3

are placed here.

Orchid Receptor Area 3 is centred at OS grid reference SE 41364 07942 and now measures 0.25ha (Plate 4). This area contains a small ditch which flows west, into the adjacent quarry. A small bund shall be created at the western end of the ditch, 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 continues to consist 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 5), as well as a shallow depression that extends in a south-westerly direction from the northern end of this ditch (Plate 6). 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 the autumn/ winter of 2022 or early spring of 2023, and the orchid spikes themselves shall be transferred during the spring of 2023. No preparation works are associated with Receptor Area 4.

All of the areas of grassland to be enhanced by the introduction of the orchids are relatively species-poor areas of 'other neutral grassland'. Receptor Areas 1 and 4 have a relatively sparse vegetation cover (>10% bare ground) and have been assessed as being in 'poor' condition. Receptor Areas 2 and 3 are less patchy; they have been assessed as being in 'moderate' condition; a departure from the original calculation which assessed as orchid receptor areas as having poor condition.

By increasing the size of Orchid Receptor Areas 1-3, and maintaining Orchid Receptor Area 4 as it was originally, 0.786ha of grassland shall be enhanced within New Park Springs, this being larger than the 0.75ha of 'other neutral grassland' due to be lost within the application site itself.

All orchid receptor areas shall be subject to appropriate management, and monitoring, following their translocation. An appropriate management plan shall be written in collaboration with the Land Trust. An annual 'orchid count' shall be undertaken and steps taken to alter management in areas where the orchids are not performing well, based on conditions that are prevailing in areas where the orchids are performing better. Corrective measures may involve strimming in the autumn/ ground disturbance in the winter, to create a more open sward and increase available bare ground, to allow orchid seeds to more readily germinate, if necessary.

In terms of the BNG calculation it is assumed that all four orchid receptor areas shall attain 'good' condition.

Plate 1: View of Orchid Receptor Area 1 (0.40ha), due to receive 100 marsh orchids.

Plate 2: View of overflow feeding Orchid Receptor Area 1, due to be 'formalised' and made permanent.

Plate 3: View of Receptor Area 2 (to the right of the footpath, 0.1ha), due to receive common spotted orchids.

Plate 4: View of Receptor Area 3 (0.25ha), due to receive 75 marsh orchids.

Plate 5: Receptor Area 4, a 180 metre long ditch on fairly level ground, due to receive circa 75 marsh orchids.

Plate 6: Shallow depression extending from the northern end of the ditch pictured above, in a south-easterly direction (to also receive some of the estimated 75 marsh orchids)

2.4.2 Scrub Planting within Grassland (Habitat Enhancement)

Following comments from Ms Katie Lawrence that scrub planting within grassland is not appropriate, other than within grassland of low quality, scrub planting within grassland is no longer proposed. Instead, the additional biodiversity units shall be delivered by replacing a greater area of conifer clearance followed by scrub planting, as described in Section 3.2.3, below.

2.4.3 Conifer Clearance and Scrub Planting (Habitat Creation)

The remaining biodiversity units, required to off-set the shortfall, would be achieved by clearing an area of relatively dense but young coniferous woodland in 'poor' condition, and replacing this with mixed, native species-rich scrub. Having considered this further, it is accepted that this comprises habitat 'creation', rather than habitat 'enhancement', and Metric 3.1 has been completed to reflect this.

This will require the removal of 1.25ha of coniferous woodland, in two blocks, rather than the 0.75ha earmarked for removal in the previous metric calculation. The mixed scrub shall comprise hawthorn (*Crataegus monogyna*), blackthorn (*Prunus spinosa*), dog rose (*Rosa canina*), hazel (*Corylus avellana*), guelder rose (*Viburnum opulus*) and elder (*Sambucus nigra*), along with pedunculate oak (*Quercus robur*), which shall comprise 10% of the overall mix. Planting shall take place at 3m centres, but there will be some variation of this, to create more naturalistic conditions.

Any existing broad-leaved trees that may be scattered within this 1.25ha conifer block shall be retained. 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.

Ongoing maintenance shall essentially comprise 'non-intervention management'; scrub simply being left to develop and mature, however, an annual inspection shall be carried out in each of the first five years and any failed stock shall be replaced on a like-for-like basis.

Overall, these enhancements and areas of habitat creation, shall yield an overall BNG of 0.71% (refer to the Metric 3.1 spreadsheet provided as Appendix 1).

All of these enhancements/ area of habitat creation are illustrated in Drawing 1.

DRAWING 1

Proposed Ecological Enhancements to New Park Springs

441000 441200 441400 441600

408000

407800

N

Orchid Recptor Area 2

0.1ha

Orchid Recptor Area 3

0.25ha

Orchid Receptor Area 1

0.40ha

Conifer Woodland Removal, Being Replaced with Mixed Scrub Area 5

0.63ha

0.036ha

Orchid Recptor Area 4

Conifer Woodland Removal, Being Replaced with Mixed Scrub Area 6

0.62ha

0 50 100 150 200

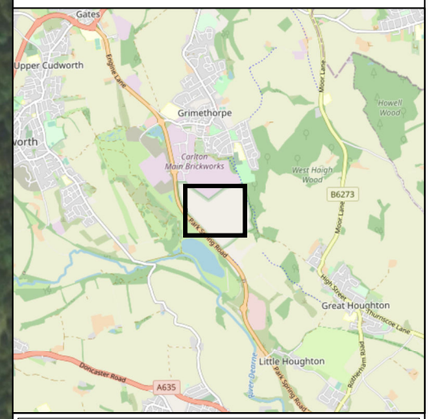
Metres

LEGEND

Orchid Receptor

Conifer Woodland Removal, Being Replaced With Mixed Scrub

Orchid Receptor Area
1 - To Recieve 100 Marsh Orchids.
2 - Due to Recieve All Common Spotted Orchids.
3 - Due to Recieve 75 Marsh Orchids.
4 - To Recieve Remainder of Marsh Orchids, Estimated to be 75 Plants).



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PROPOSED ECOLOGICAL ENHANCEMENTS TO 'NEW PARK SPRINGS'

DRAWING 1

Scale 1:2,500 @ A3

Date SEPTEMBER 2022

03044.00237.0003.1 Proposed Ecological Enhancements to New Park Springs

APPENDIX 1

Revised Metric 3.1 BNG Assessment (supplied separately in Excel format)

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