Project No: 312040

Biodiversity Net Gain Calculations Report: Leaford Solar Farm

Prepared for:

RES

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Contents Amendment Record

This report has been issued and amended as follows:

Revision	Description	Date	Signed
0.1	Draft	15 November 2023	R. Campbell
1.0	Final	11 December 2023	R. Mansbridge
2.0	Update post client comments	21 December 2023	R. Campbell
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Acknowledgement

This report has been prepared for the sole and exclusive use of RES in accordance with the scope of work presented in Mabbett & Associates Ltd (Mabbett) Letter Agreement (312040/LA/SB/pb), dated 30 January 2024. This report is based on information and data collected by Mabbett. Should any of the information be incorrect, incomplete, or subject to change, Mabbett may wish to revise the report accordingly.

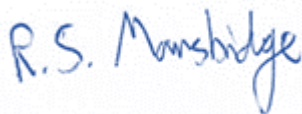This report has been prepared by the following Mabbett personnel:

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This report has been reviewed and approved by the following Mabbett personnel:

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Rob Mansbridge, BSc (Hons) ACIEEM
Senior Ecologist

Table of Contents

Section 1.0: Introduction

1.1 Overview

Mabbett & Associates Ltd (Mabbett) was commissioned by RES in January 2023 to conduct a Preliminary Ecological Appraisal and a Biodiversity Net Gain assessment on the site known as Leaford (Fulford) Solar Farm, Fulford, Stoke-on-Trent, centred on Ordnance Survey (OS) Grid Reference: SJ 95651 39248 and hereafter referred to as 'the site'.

This report has been prepared by Mabbett Ecologist Becca Campbell MSc, BSc (Hons).

1.2 Development Proposals

It is understood that current proposals comprise of the development of ground-mounted solar photovoltaic modules and associated infrastructure across a 45.45 ha area, equating to approximately 30 MW of output, as well as associated infrastructure which includes transformers, switchroom, battery storage, fencing and security, access tracks, and onsite and offsite cabling to enable connection to the local grid. In addition, landscaping and biodiversity enhancement measures will be undertaken.

1.3 Site Location

The site is located approximately 0.5 km north-east of the village of Fulford, Staffordshire; the original survey area comprised of approximately 84 ha of woodland, extensive hedgerows, arable fields and improved grassland used for grazing livestock. The proposed development area comprises approximately 69.21 ha.

Habitats adjacent to the site are largely similar to the site itself and consist of agricultural fields, hedgerows and farm buildings as well as the village of Fulford to the south-west.

1.4 Purpose of the Report

This report sets out the methodology used and the results of the BNG assessment which follow the DEFRA Statutory Biodiversity Metric Calculator (Natural England, 2023). The current proposed development plan & Landscape Ecological Management Plan (LEMP) (Appendix B) has been used to model the development, with the target of creating an overall biodiversity net gain across the site of at least 10%, in line with the mandatory 10% net gain in the Environment Act (2021) effective from January 2024 and to adhere to Policy 2 in the South Staffordshire Council Core Strategy Development Plan (South Staffordshire Council, 2012) which specifies:

"…Particular support will be given to initiatives to improve the natural environment where it is poor and increase the overall biodiversity of the District…"

and;

"The restoration or creation of new habitats and the expansion of habitats in South Staffordshire will be supported where these contribute to priorities in the UK Biodiversity Action Plan and the Staffordshire Biodiversity Action Plan including priority habitats such as native woodland, hedgerows, and lowland heathland."

Section 2.0: Methodology

2.1 Field Survey and Condition Assessment

An Ecological Appraisal was conducted on the 17th, 18th and 19th of April 2023 by Mabbett Senior Ecologist Rob Mansbridge and Mabbett Ecologist Becca Campbell MSc, BSc (Hons). Habitat type was recorded during the survey using the UK Habitat Classification Methodology (UKHab Ltd, 2023) and habitat condition was assessed using the classification criteria outlined in the Biodiversity Metric 4.0 Technical Supplement (Natural England, 2023). A further habitat survey was conducted on an additional 18.4 ha area adjacent to the site boundary by Ecologist Richard Millington, subcontracted by Mabbett, in July 2023. The results of the Ecological Appraisal are reported in 'ECOr1800 Leaford Solar Farm Preliminary Ecological Appraisal' (Mabbett, 2023), included as part of the planning application.

Following the survey, this data was inputted into QGIS and analysed to find the areas of the different UKHab (UKHab Ltd, 2023) habitats. The area that would be occupied by the development was also calculated. These were inputted into the biodiversity calculator to find the baseline biodiversity units for the site. The post development biodiversity unit score was calculated based on the areas of each habitat to be retained and/or enhanced in QGIS. The total area of the proposed development infrastructure was subtracted from each habitat in turn and then inputted into the biodiversity calculator to determine the percentage change in habitat (loss or gain).

2.2 Biodiversity Net Gain Calculations

The DEFRA Statutory Biodiversity Metric Calculator (UKHab Ltd, 2023) was used to assess measurable biodiversity loss or gain for the site based on one scenario.

The original survey area (Figure 1) encompasses an area of approximately 84 ha whereas the proposed site boundary encompasses an area of approximately 69.21 ha.

The first scenario, where guidance enables, focuses on enhancing existing habitats within the site boundary to habitats of greater 'Distinctiveness'. For example, enhancing existing modified grassland habitats to other neutral grassland. It also focuses on the enhancement of existing hedgerows to those of greater 'Distinctiveness' improving hedgerow condition, as well as the creation of new hedges, planting new lines of trees and planting of trees in existing hedges.

For each scenario, a Biodiversity Net Gain calculation was undertaken, which calculated the baseline biodiversity unit value (BU), the effects of the proposed development, along with quantifying the proposed mitigation, enhancement, and habitat creation. There were three steps to the metric:

1. Baseline habitat data from the ecological assessment was obtained and put into the metric by selecting the most suitable habitat types. To determine BU value of the site, the data included polygon-based habitat such as fields and water bodies, and linear habitats such as hedgerows;
2. The projected habitat enhancements were included. This was based on areas of retained habitats which showed enhancement potential for biodiversity improvement;
3. The proposed habitat creation was included into the metric, which is compared to the baseline minus the habitat loss, and produces the overall biodiversity net gain, or loss.

Section 3.0:   Results

3.1   Proposed Development Layout

The elements of proposed development and the habitat types which they will impact are described in Table 1. The total area proposed to be developed encompasses approximately 45.45 ha.

Table 1: Infrastructure Elements and Coincident Habitats.

Infrastructure Element	Area (ha)	Coincident Habitats
Solar Array	45.45	`Lolium – Cynosurus Neutral Grassland`, Modified grassland, mixed scrub
Transformers, Switchroom, Battery Storage and Access Roads		`Lolium – Cynosurus Neutral Grassland`, Modified grassland, native hedgerow
Retained habitats (Without infrastructure)	16.30	Modified grassland, lowland mixed deciduous woodland, lowland beech and yew woodland, mixed scrub.

It is anticipated that the base substrate of the area under the solar array will not be changed and that the panels will be set on piles to minimise ground disturbance. It is assumed that shading caused by the solar panels will have a minimal impact on the existing plant assemblage underneath the panels as they are generally habitats of low distinctiveness and lacking in plant diversity.

Areas of each habitat pre- and post- development without habitat creation or enhancement are summarised in Table 2.

Table 2: Habitat areas pre-development and post-development without habitat creation or enhancement.

Habitat Type	Area (ha) pre-development	Area (ha) post-development
Lowland beech and yew woodland	0.463	0.463
Lowland mixed deciduous woodland	1.922	1.922
Mixed scrub	0.079	0.069
Modified grassland	52.241	49.938
Other neutral grassland	15.613	14.422

3.2   Baseline Habitat Conditions

Baseline habitat conditions for the 71.24 ha area assessed for BNG are summarised in Table 3. The actual area to be developed comprises 69.21 ha; the layout design excludes two areas of woodland, accounting for the difference of 2.03 ha. The woodlands have been included in the BNG calculations as habitats to be retained.

Table 3: Habitat areas, condition assessments and ecological baseline units.

Habitat Type	Area (ha)	Condition	Required action to meet trading rules	Ecological Baseline Total Habitat Units
Lowland mixed deciduous woodland	1.504	High	Same habitat required	31.13
Lowland mixed deciduous woodland	0.124	High	Same habitat required	2.57

Lowland mixed deciduous woodland	0.294	High	Same habitat required	6.09
Lowland beech and yew woodland	0.463	High	Same habitat required	9.58
Mixed scrub	0.079	Medium	Same broad habitat or a higher distinctiveness habitat required	0.35
Modified grassland	4.771	Low	Same distinctiveness or better habitat required	9.54
Modified grassland	2.526	Low	Same distinctiveness or better habitat required	5.05
Modified grassland	7.125	Low	Same distinctiveness or better habitat required	14.25
Modified grassland	11.058	Low	Same distinctiveness or better habitat required	22.12
Modified grassland	4.073	Low	Same distinctiveness or better habitat required	8.15
Modified grassland	12.716	Low	Same distinctiveness or better habitat required	25.43
Modified grassland	3.359	Low	Same distinctiveness or better habitat required	6.72
Modified grassland	5.213	Low	Same distinctiveness or better habitat required	10.43
Modified grassland	2.144	Low	Same distinctiveness or better habitat required	4.29
Other neutral grassland	3.169	Medium	Same broad habitat or a higher distinctiveness habitat required	25.35
Other neutral grassland	5.758	Medium	Same broad habitat or a higher distinctiveness habitat required	46.06
Other neutral grassland	2.719	Medium	Same broad habitat or a higher distinctiveness habitat required	21.75
Other neutral grassland	4.455	Medium	Same broad habitat or a higher distinctiveness habitat required	35.64
Total	**71.55**			**284.5**

3.3 Habitat Areas

The proposed development plan focuses on enhancing the existing habitats underneath and around the solar panels, comprising of an area of circa 51.916 ha.

'Modified grassland' habitats would be enhanced to 'Other neutral grassland' habitats whereas the majority of 'Other neutral grassland' habitats would be retained as they are, with an area of approximately 1.177 ha enhanced to 'Lowland meadow' habitat.

The results of area habitats are summarised in Table 4, Table 5 and Photo 1.

Hedgerow creation, enhancement and the planting of trees within existing hedgerows is recommended throughout the site. Hedgerow enhancement predominantly focuses on hedgerows considered to be in a poor condition due to consistent gaps or a lack of mature trees. It is proposed to create approximately 1.4 km of hedge, enhance approximately 1 km of hedge, and plant trees within approximately 1 km of hedge.

The results of linear habitats are summarised in Table 6, Table 7 and Photo 1.

3.4 Biodiversity Calculations

3.4.1 Habitat Units

Table 4: Biodiversity Net Gain calculations summary for Habitat Units (BU - Biodiversity Units).

Baseline Habitats	Area (ha)	Baseline Condition	Baseline Total BU	Habitats Lost (ha / m)	Habitats Retained (ha / m)	Habitats enhanced (ha / m)	Change in BU per Habitat
Lowland mixed deciduous woodland	1.504	High	31.13	0	1.504	0	0
Lowland mixed deciduous woodland	0.124	High	2.57	0	0.124	0	0
Lowland mixed deciduous woodland	0.294	High	6.09	0	0.294	0	0
Lowland beech and yew woodland	0.463	High	9.58	0	0.463	0	0
Mixed scrub	0.079	Medium	0.35	0.01	0.069	0	-0.04
Modified grassland	4.771	Low	9.54	0.24	0	4.532	+37.17
Modified grassland	2.526	Low	5.05	0	0	2.526	+20.72
Modified grassland	7.125	Low	14.25	0.24	0	6.885	+56.47
Modified grassland	11.058	Low	22.12	0.24	0	10.819	+88.73
Modified grassland	4.073	Low	8.15	0.26	0	3.817	+31.31
Modified grassland	12.716	Low	25.43	0.98	0	11.74	+96.29
Modified grassland	3.359	Low	6.72	0	0	3.359	+27.55
Modified grassland	5.213	Low	10.43	0.16	0	5.049	+41.41
Modified grassland	2.144	Low	4.29	0.13	0	2.012	+16.5
Other neutral grassland	3.169	Medium	25.35	0.01	3.157	0	0
Other neutral grassland	5.758	Medium	46.06	0.24	5.523	0	0
Other neutral grassland	2.719	Medium	21.75	0	2.719	0	0
Other neutral grassland	4.455	Medium	35.64	0	3.278	1.177	+49.47

Table 5: Areas of each habitat to be enhanced under BNG.

Original Habitat	Area retained (ha / m)	Area Enhanced (ha / m)	Enhanced Habitat
Modified grassland	0	50.739	Other neutral grassland
Other neutral grassland	11.399	1.177	Lowland meadow

3.4.2 Hedgerow Units

Table 6: Biodiversity Net Gain calculations summary for Hedgerow Units (HU – Hedgerow Units).

Hedgerow Type	Length (km)	Baseline Condition	Baseline Total BU	Hedgerow Lost (km)	Hedgerow Retained (km)	Hedgerow Enhanced (km)	Change in HU per Hedgerow
Native hedgerow with trees	0.091	Moderate	0.84	0		0.091	+1.20
Native hedgerow with trees	0.033	Poor	0.15	0		0.033	+0.27
Native hedgerow with trees	0.111	Poor	0.51	0	0.111		0
Native hedgerow	0.169	Moderate	0.78	0		0.169	+1.32
Native hedgerow	0.084	Moderate	0.39	0	0.084		0
Native hedgerow	0.127	Moderate	0.58	0	0.1228		-0.02
Native hedgerow	0.122	Moderate	0.56	0	0.122		0
Native hedgerow - associated with bank or ditch	0.075	Poor	0.35	0		0.075	+0.66
Native hedgerow with trees	0.34	Good	4.69	0	0.34		0
Native hedgerow - associated with bank or ditch	0.175	Poor	0.81	0	0.173		-0.01
Native hedgerow	0.276	Good	1.90	0	0.276		0
Native hedgerow with trees	0.173	Moderate	1.59	0	0.173		0
Native hedgerow	0.102	Poor	0.23	0	0.102		0
Native hedgerow	0.041	Poor	0.09	0	0.041		0
Native hedgerow with trees	0.096	Moderate	0.88	0	0.096		0
Native hedgerow - associated with bank or ditch	0.13	Moderate	1.20	0		0.13	+2.24
Native hedgerow - associated	0.039	Moderate	0.36	0		0.039	+0.67

Hedgerow Type	Length (km)	Baseline Condition	Baseline Total BU	Hedgerow Lost (km)	Hedgerow Retained (km)	Hedgerow Enhanced (km)	Change in HU per Hedgerow
with bank or ditch							
Native hedgerow	0.303	Moderate	1.39	0	0.241	0.062	+0.48
Native hedgerow - associated with bank or ditch	0.305	Good	6.31	0.01	0.2995		-0.11
Native hedgerow with trees	0.192	Moderate	1.77	0	0.1904		-0.01
Line of trees	0.163	Moderate	0.75	0	0.163		0
Native hedgerow with trees	0.081	Good	1.12	0	0.081		0
Native hedgerow with trees	0.131	Good	1.81	0	0.131		0
Native hedgerow	0.213	Good	1.47	0	0.213		0
Native hedgerow - associated with bank or ditch	0.116	Moderate	1.07	0	0.116		0
Line of trees	0.097	Poor	0.22	0	0.097		0
Native hedgerow with trees - associated with bank or ditch	0.252	Good	5.22	0	0.2474		-0.10
Native hedgerow with trees	0.194	Good	2.68	0		0.194	+3.8
Native hedgerow with trees	0.156	Good	2.15	0	0.156		0
Line of trees - associated with bank or ditch	0.072	Moderate	0.33	0	0.072		0
Native hedgerow with trees - associated with bank or ditch	0.169	Moderate	2.33	0	0.169		0

Hedgerow Type	Length (km)	Baseline Condition	Baseline Total BU	Hedgerow Lost (km)	Hedgerow Retained (km)	Hedgerow Enhanced (km)	Change in HU per Hedgerow
Line of trees	0.132	Moderate	0.61	0.01	0.1265		-0.03
Native hedgerow with trees	0.165	Poor	0.63	0		0.165	+2.13
Native hedgerow with trees	0.148	Good	2.04	0	0.148		0
Native hedgerow with trees	0.185	Moderate	1.70	0	0.185		0
Native hedgerow with trees - associated with bank or ditch	0.232	Good	4.80	0	0.232		0
Line of trees	0.132	Moderate	0.61	0	0.132		0
Line of trees	0.213	Good	1.47	0.01	0.2035		-0.07
Line of trees	0.061	Moderate	0.28	0	0.061		0
Native hedgerow with trees	0.135	Moderate	1.24	0	0.135		0
Native hedgerow with trees	0.149	Moderate	1.37	0	0.149		0
Line of trees	0.297	Moderate	1.37	0	0.297		0
Native hedgerow with trees	0.283	Poor	1.30	0.06	0.222		-0.28
Native hedgerow - associated with bank or ditch	0.131	Moderate	1.21	0	0.016		-1.06
Native hedgerow	0.214	Moderate	0.98	0	0.214		0
Native hedgerow with trees	0.129	Moderate	1.19	0		0.1274	+2.40
Native hedgerow with trees - associated with bank or ditch	0.121	Good	2.50	0	0.117		-0.08
Native hedgerow	0.204	Good	1.41	0	0.204		0
Native hedgerow	0.238	Poor	0.55	0	0.116	0.122	+0.75

Hedgerow Type	Length (km)	Baseline Condition	Baseline Total BU	Hedgerow Lost (km)	Hedgerow Retained (km)	Hedgerow Enhanced (km)	Change in HU per Hedgerow
Native hedgerow - associated with bank or ditch	0.168	Poor	0.77	0	0.168		0
Native hedgerow with trees	0.16	Poor	0.74	0		0.16	+1.33
Native hedgerow	0.047	Moderate	0.22	0	0.047		
Native hedgerow	0.235	Moderate	1.08	0	0.235		
Native hedgerow	0.279	Good	1.93	0.01	0.2731		-0.04
Line of trees	0.108	Moderate	0.50	0	0.108		
Native hedgerow	0.121	Poor	0.28	0	0.121		
Native hedgerow with trees	0.245	Poor	1.13	0	0.085	0.16	+1.33

Table 7: Onsite hedgerow creation for biodiversity net gain.

Hedgerow Reference	Hedgerow Type	Length (km)	Anticipated Condition	Hedge Units Delivered
1A	Native hedgerow	0.179	Moderate	0.69
1B	Native hedgerow	0.1	Moderate	0.38
1C	Native hedgerow	0.392	Moderate	1.51
1D	Native hedgerow	0.182	Moderate	0.70
1E	Native hedgerow	0.171	Moderate	0.66
1F	Native hedgerow	0.09	Moderate	0.35
1G	Native hedgerow	0.22	Moderate	0.85
1H	Native hedgerow	0.224	Moderate	0.86
1I	Native hedgerow with trees	0.141	Moderate	0.91
1J	Native hedgerow	0.301	Moderate	1.16
1K	Native hedgerow	0.214	Moderate	0.82
1L	Native hedgerow – associated with bank or ditch	0.097	Moderate	0.75

On-site baseline	Habitat units	284.50	
	Hedgerow units	76.55	
	Watercourse units	0.00	
On-site post-intervention (Including habitat retention, creation & enhancement)	Habitat units	495.59	
	Hedgerow units	93.43	
	Watercourse units	0.00	
On-site net change (units & percentage)	Habitat units	211.10	74.20%
	Hedgerow units	16.87	22.04%
	Watercourse units	0.00	0.00%

Photo 1: Photo 1: Summary of onsite Biodiversity Unit Totals and Net % Change.

The calculations have indicated that the proposed development, would result in an overall biodiversity net **gain** of 74.20% for habitat units and a biodiversity net **gain** of 22.04% for hedgerow units, both of which are above the required 10% threshold.

Section 4.0:   Constraints

4.1   Assumptions and Limitations

Should the plan be altered in the future, with the areas designated for habitat retention or creation becoming larger, or smaller, then the results of the calculations would change.

The exact size of habitat areas designated for BNG were not provided with the Proposed Development Plan. However, the Proposed Development Plan was informed by the LEMP produced by Mabbett, with collaboration between the Planning & Development Team and Ecology Team, to specify areas of the site for potential Biodiversity Net Gain. The Proposed Development Plan was superimposed onto a site map on QGIS, a GIS software package, and the area of each habitat area calculated. Therefore, it is possible that the sizes of each habitat area may be slightly different to their actual proposed size through human error. However, it is considered that any error would be small enough to not affect the biodiversity net gain calculations.

Habitat Condition Assessment, conducted during the Ecological Appraisal in April 2023, was assessed using the classification criteria outlined in the Biodiversity Metric 4.0 Technical Supplement (Natural England, 2023), released on the 28th of March 2023 and the most up-to-date version of the metric available at the time of survey. The DEFRA Statutory Biodiversity Metric Calculator (UKHab Ltd, 2023) was released in December 2023 and was used in this report in order to assess measurable biodiversity loss or gain for the site. Despite initial habitat condition assessments being conducted under a previous metric, metric 4.0 is still a valid and comparable method of data collection and the data collected could be ran through the more up-to-date Statutory Biodiversity Metric Calculator. On this basis, the use of an older Biodiversity Metric is not considered to be a significant limitation.

Section 5.0: Conclusions

The biodiversity net gain calculations show an increase in overall net gain in biodiversity for both habitat units and hedgerow units; both are above the required 10% threshold and thus suitable for meeting BNG targets with a net gain of 74.20% for habitat units and a net gain of 22.04% for hedgerow units.

The scenario has focused on enhancing existing habitats found on site to those of greater 'Distinctiveness' and has largely focused on enhancing modified grassland habitats to other neutral grassland habitats. It should be noted that modified grassland habitats are the product of historical and repeated fertiliser application, leading to persistent high nutrient levels in the soil. Most wildflower plant species are nitrogen-fixing and thus intolerant of nutrient-rich soils and are rapidly out-competed by grasses. Even after fertiliser input stops, nutrient levels will remain consistently high in soils for many years and thus restoration to biodiverse and ecologically-rich wildflower meadows is not a quick process. Successful grassland/meadow restoration can take up to 15 years or more for some species to establish and flower (Magnificent Meadows, 2023). On this basis, it has been recommended that modified grassland habitats are enhanced to other neutral grassland habitats, as opposed to lowland meadow habitats, as this is a more realistic habitat change in the short-term.

Additional management of these habitats will also increase their ecological value in the long term; this could include light grazing or cutting, with the complete removal of grass cuttings, to avoid ongoing nutrient enrichment. Although wildflower seeds can survive dormant in soils for many years, it is unknown whether these natural seed stocks persist in the soil after many years of fertiliser input. Thus, future application of wildflower seed mixes, when nutrient levels in the soils have naturally reduced, could also aid the ecological enhancement of these grasslands. In the long term, these grasslands may "recover" to a more wildflower-diverse sward. Shading caused by the solar panels can delay flowers blooming or prevent them from blooming at all in the long term.

Alternative solutions could include application of wildflowers/seed mixes more tolerant of high nutrient levels e.g. yarrow *Achillea millefolium*, bugle *Ajuga reptans,* common knapweed *Centaurea nigra*, field scabious *Knautia arvensis,* oxeye daisy *Leucanthemum vulgare,* ragged-robin *Silene flos-cuculi* and self-heal *Prunella vulgaris.* Alternatively, or in addition, application of shade-tolerant wildflowers in the longer term may increase plant diversity and thus associated ecological value.

The majority of existing other neutral grassland habitats have been excluded from BNG calculations. Grassland habitats can only be enhanced to traditional orchards, bracken, floodplain wetland mosaic, lowland calcareous grassland, lowland dry acid grassland, lowland meadow, modified grassland, other lowland acid grassland, tall herb communities, upland acid grassland and upland calcareous grassland. The only realistic and practical habitat enhancement in this instance (many of the others being dependent on soil pH or tall ruderal vegetation) is to lowland meadow habitats. As discussed above, the establishment of a wildflower meadow would be dependent on a depletion of soil nutrients over time and shading caused by solar panels would impact wildflower diversity and their ability to flower. Therefore, a full enhancement of these habitats underneath the solar panels to lowland meadow is unlikely and they have been excluded on this basis.

Enhancement of other neutral grassland habitats to lowland meadow habitats would likely require tilling and then application of local green hay or wildflower seeds, sourced locally if possible. It would also require an annual hay cut after plants have set seed (late summer to early autumn) potentially followed by grazing until the end of October. Plant cuttings should be removed to avoid soil nutrient enrichment. Management of lowland meadow habitats require an annual management commitment as a minimum.

Alternative enhancement measures for grassland habitats could include the planting of yellow rattle *Rhinanthus minor*, considered a 'wildflower meadow-maker'. Yellow rattle is parasitic in nature and takes nutrients from grass roots, weakening the grasses present, and allowing for a natural regeneration of wildflowers. This process could be enhanced further with the application of native wildflower seed mixes (local seed stocks preferable) or green hay.

Section 6.0:   Bibliography

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Appendix A: Figures

Figure No.	Summary
Figure 1	Proposed Site Layout & UK Hab Results
Figure 2	Habitats to retain
Figure 3	Habitats to be enhanced

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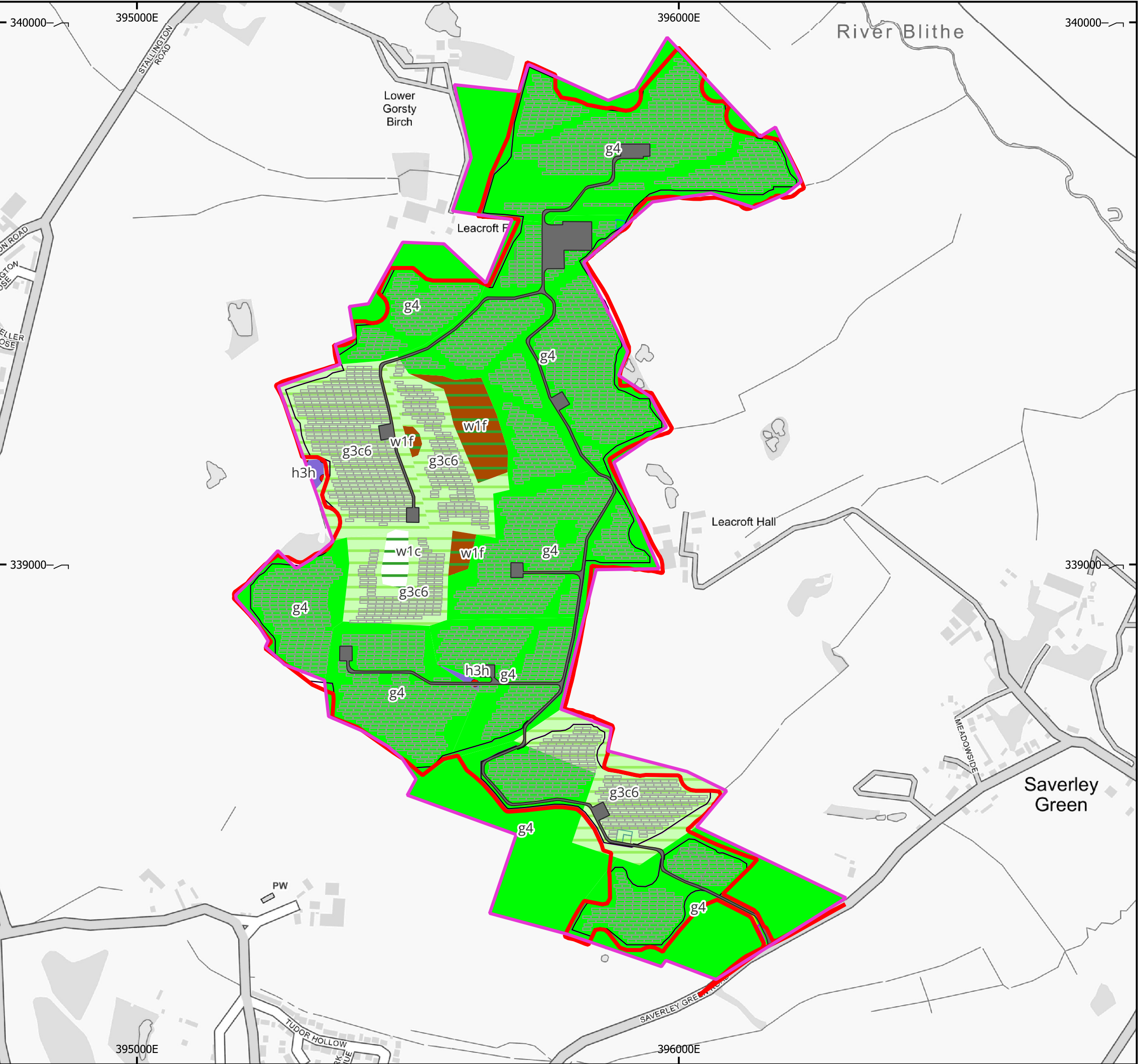
LEAFORD SOLAR FARM

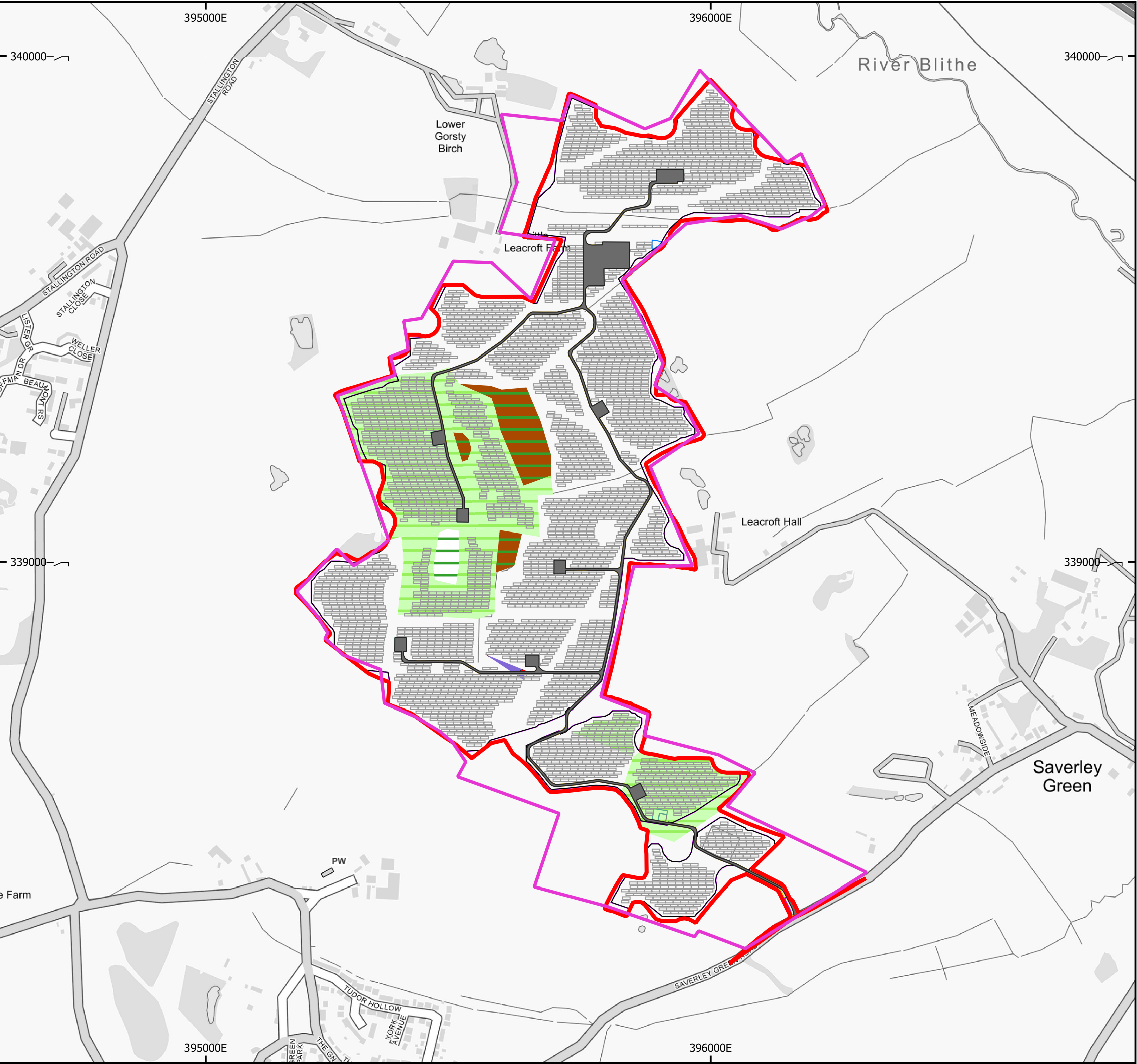| RES	Figure 1 - Proposed Site Layout & UKHab Results

KEY

◻ Site Boundary
◻ Survey Area
■ Hardstanding and Access Track

Habitats
— w1c Lowland beech and yew woodland
■ w1f Lowland mixed deciduous woodland
■ h3h Mixed scrub
■ g4 Modified grassland
■ g3c6 Other neutral grassland
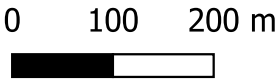
0   100   200 m

N

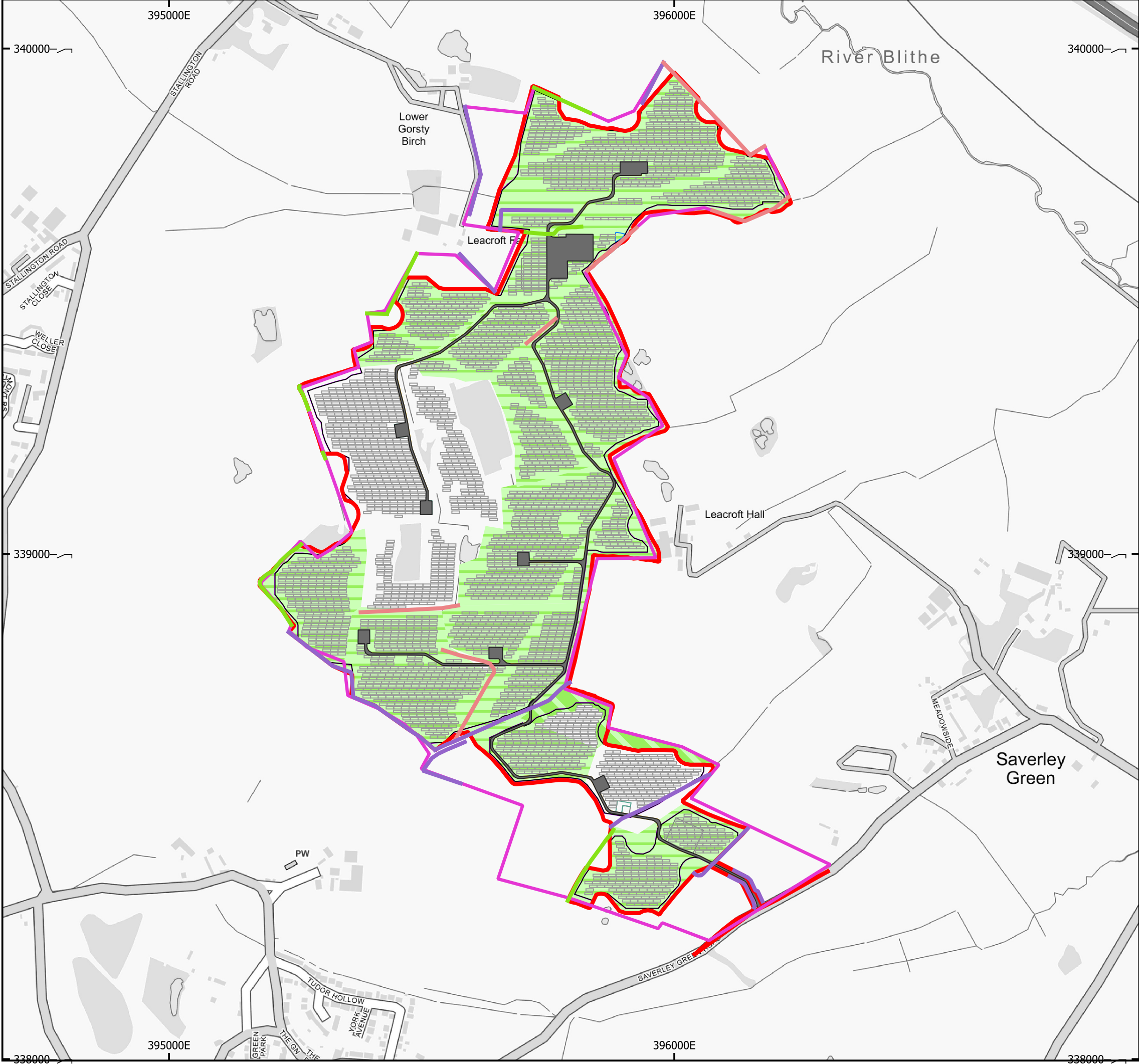| Drawing Number: ECOd2132A	Project Number: 312040			
SHEET: A3	SCALE: 1:7,000	BY: BC	QA: RM	REV: 1.0
Projection: OSGB 1936/British National Grid - EPSG 27700	Issue Date:15/11/2023			

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LEAFORD SOLAR FARM

RES	Figure 2 - Habitats to Retain

KEY
- Site Boundary
- Survey Area
- Hardstanding and Access Track

Habitats to Retain
- w1c Lowland beech and yew woodland
- w1f Lowland mixed deciduous woodland
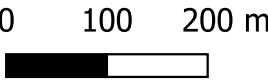- h3h Mixed scrub
- g3c6 Other neutral grassland

0   100   200 m

N

Drawing Number: ECOd2133A		Project Number: 312040		
SHEET: A3	SCALE: 1:7,500	BY: BC	QA: RM	REV: 1.0
Projection: OSGB 1936/British National Grid - EPSG 27700		Issue Date:15/11/2023		

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LEAFORD SOLAR FARM

RES	Figure 3 - Habitats to Enhance

KEY

Site Boundary
Survey Area
Hardstanding and Access Track

Proposed Enhanced Habitats

g3a Lowland meadows
g3c Other neutral grassland

Hedgerow Creation & Enhancement

Create
Enhance
Enhance - Trees

0   100   200 m

N

Drawing Number: ECOd2134A		Project Number: 312040		
SHEET: A3	SCALE: 1:7,500	BY: BC	QA: RM	REV: 1.0
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Appendix B: Landscape Ecological Management Plan

Leaford Solar Farm

Client:
Renewable Energy Systems Ltd. | **Landscape and Ecology Management Plan (LEMP)**

KEY

- ▭ Development Boundary
- ▭ Site Boundary
- ▭ Field Numbers
- ▮ Existing Ponds
- ━ Existing Trees and Hedgerow
- ▮ Existing Woodland Areas
- ▭ Removed Hedgerow
- ┈ Public Rights of Way
- ▭ Proposed Native Species Trees
- ┅ Proposed Grassland
- ▮ Proposed Enhanced Grassland
- ▮ Proposed Wildflower Seed Mix
- ━ Proposed Native Species Hedge Maintained to >3.5m
- ▮ Areas of Hardstanding and Access Track
- ▮ Bat Box
- ▮ Bee Bank

Details of planting and management of trees, hedgerows and wildflower meadows are included in Appendix 2 of the LVIA.

0   100   200 m

Figure 19	Project Number: 312040
SHEET A3	SCALE 1:10,000	BY BT	QA LB	REV 5.0
Map Projection: British National Grid	December 2023