Studley Grange Closed Landfill Site, Swindon

Studley Grange Solar Scheme - Biodiversity Net Gain Report

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Executive Summary

A Biodiversity Net Gain (BNG) assessment was undertaken in connection with proposals for the installation of ground-mounted solar photovoltaic (PV) arrays at Studley Grange Closed Landfill, Hay Lane, Lydiard Tregoze, Swindon, Wiltshire, SN4 9QT.

A UK HAB survey was undertaken on 08 April 2025 to map the habitats on the site and condition assessment data was collected on 13 June 2025. The Statutory Biodiversity Metric, which calculates the pre-development biodiversity value of the onsite habitats was completed on on 17 March 2026.

No irreplaceable habitats were recorded on site and no known degradation of habitats has occurred since these assessments were undertaken.

A post development calculation of biodiversity value of the site has also been undertaken to quantify the anticipated losses and gains in biodiversity that would occur as a result of the development taking place.

The results show that a 10% net gain in biodiversity is feasible on the site, as required under Schedule 7A of the Town and Country Planning Act 1990 (HMSO, 1990) (as inserted by Schedule 14 of the Environment Act 2021 (HMSO, 2021)) and the National Planning Policy Framework (NPPF) (Ministry of Housing, Communities and Local Government, 2023).

The results indicate that the development would result in a 21.04 % increase in habitat units. The plans therefore surpass the net gain that would be required to meet the needs of the statutory BNG regulations for habitats. No hedgerow or watercourses were present on site therefore no targets for these habitats are required.

1. Introduction

AB Ecology was commissioned by Heatons on behalf of Biffa Waste Services Ltd. to undertake a Biodiversity Net Gain (BNG) Assessment in connection with a proposed solar installation on part of their closed landfill site at Studley Grange Closed Landfill, Hay Lane, Lydiard Tregoze, Swindon, Wiltshire, SN4 9QT. The site location can be seen on Drawing 1; all land within the site boundary is hereafter referred to as the 'site'. The site is located at Ordnance Survey National Grid Reference SU 1007 8172.

1.1 Site and Scheme Description

The site is approximately 6.45 ha in size and is dominated by a modified grassland field with an existing access track in the north of the site. A small area of tall forbs will be lost to the solar site compound which will be situated to the west of the current access road close to the current gas compound (see Appendix C).

Proposals include the installation of ground-mounted solar photovoltaic (PV) arrays within the modified grassland field within the site boundary. A solar compound area will be created to house necessary infrastructure related to the solar panels to the south of the current access road adjacent to the current gas compound.

1.2 Legislation and Policy

BNG is an approach to development. It makes sure that habitats for wildlife are left in a measurably better state than they were before the development. In England, BNG is mandatory under Schedule 7A of the Town and Country Planning Act 1990 (HMSO, 1990) (as inserted by Schedule 14 of the Environment Act 2021 (HMSO, 2021)). It is also required as part of the National Planning Policy Framework (NPPF) (Ministry of Housing, Communities and Local Government, 2023). For full details see Appendix A.

There are various exemptions from BNG rules (HMSO 2024a), however the proposed development plans do not fall under any of these exemptions, therefore they must deliver a BNG of at least 10%. This means that the development will result in more or better-quality natural habitat than there was before development.

1.3 Purpose of Report

The purpose of this assessment is to quantify the biodiversity losses and gains arising from the development proposals, and to assess the feasibility of achieving a net gain in biodiversity once the development has been completed.

1.4 Survey Personnel

The BNG survey work including the PEA survey, mapping of habitats and completion of habitat condition assessments was undertaken by Angus Layton, Ecologist (ACIEEM). Angus has seven years' experience in ecological consultancy and has delivered over 20 BNG assessments for residential and commercial developments. He is confident in applying the Statutory Biodiversity Metric in line with current guidance and has completed multiple UK Hab and botany training courses supporting accurate habitat classification.

Completion of the metric calculator and BNG reporting was undertaken by Adele Antcliff MSc, BSc. (Hons) MCIEEM[1]. Adele is an experienced ecologist and has spent over 20 years working as a consultant ecologist; she has undertaken numerous BNG assessments throughout the UK within the past five years and is competent to undertake such assessments.

1.5 Biodiversity Net Gain (BNG)

BNG is the end result of a process applied to developments so that overall, there is a positive outcome for biodiversity. This assessment was informed by the Statutory Biodiversity Metric (DEFRA, 2024a), which is a spreadsheet calculator that allows a quantitative assessment to be undertaken of biodiversity on a site.

Achieving BNG requires appropriate action to avoid and minimise the impacts of the development on the sites' biodiversity (CIEEM, 2021). This should follow the BNG mitigation hierarchy as set out in Table 1.

Table 1: BNG Mitigation Hierarchy *(adapted from Good Practice Requirements for Delivering Biodiversity Net Gain (on- and off-Site) (CIEEM, 2021).*

Action in order of priority		
1	**Avoid**	Habitats are retained.
2	**Minimise**	Development is redesigned to limit the extent of the land take from natural habitats.
3	**Restore**	Condition of on-site habitat is improved (e.g. degraded habitat is brought back into good condition).
4	**Offset/Compensate**	Create habitat of similar type where is did not previously occur or enhance existing habitats elsewhere.
5	**Additional Actions**	Use to achieve the desired target level of gain.

For BNG to be used appropriately, the good practice principles (CIEEM *et al.*, 2016) were established, and these set out how to achieve BNG. All developments should follow the ten good practice principles, each of which is summarised below.

Principle 1. Apply the Mitigation Hierarchy

Do everything possible to first avoid and them minimise impacts on biodiversity and as a last resort, compensate for losses that cannot be avoided.

Principle 2. Avoid losing biodiversity that cannot be offset by gains elsewhere

Avoid impacts on irreplaceable biodiversity – these impacts cannot be offset to achieve No Net Loss or Net Gain.

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Principle 3. Be inclusive and equitable

Engage stakeholders early, and involve them in designing, implementing, monitoring and evaluating the approach to Net Gain.

Principle 4. Mitigate difficulty, uncertainty and other risks to achieving Net Gain.

Apply well accepted ways to add contingency when calculating biodiversity losses and gains in order to account for any remaining risks, as well to compensate for the time between the losses occurring the gains being fully realised.

Principle 5. Make a measurable Net Gain contribution

Achieve a measurable, overall gain for biodiversity and the services ecosystems provide while directly contributing towards nature conservation priorities.

Principle 6. Achieve the best outcomes for biodiversity

Achieve the best outcomes by using robust, credible evidence and local knowledge to make clearly justified choices when:

- Delivering compensation that is ecologically equivalent in type, amount and condition, and that accounts for the location and timing of biodiversity losses;
- Compensating for losses of one type of biodiversity by providing a different type that delivers greater benefits for nature conservation;
- Achieving Net Gain locally to the development while also contributing towards nature conservation priorities at local, regional and national levels;
- Enhancing existing or creating new habitat;
- Enhancing ecological connectivity by creating, bigger, better and more joined areas for biodiversity.

Principle 7. Be additional

Achieve nature conservation outcomes that demonstrably exceed existing obligations (i.e. do not deliver something that would occur anyway).

Principle 8. Create a Net Gain legacy

Ensure Net Gain generates long-term benefits by:

- Engaging stakeholders and jointly agreeing practical solutions that secure Net Gain in perpetuity;
- Planning for adaptive management and securing dedicated funding for long-term management;
- Designing Net Gain for biodiversity to be resilient to external factors, especially climate change;
- Mitigating risks from other land uses;
- Avoiding displacing harmful activities from one location to another;
- Supporting local-level management of Net Gain activities

Principle 9. Optimise sustainability

Prioritise Biodiversity Net Gain and, where possible, optimise the wider environmental benefits for a sustainable society and economy

Principle 10. Be transparent

Communicate all Net Gain activities in a transparent and timely manner sharing the learning with all stakeholders.

2. Methodology

2.1 Site Assessment

A suitably qualified ecologist visited the site during daylight hours on 08 April 2025 to carry out a UK Hab Survey to map the habitats and record any evidence of protected species (Peach Ecology, 2025). As the majority of the habitats were grassland it was recommended a further site visit was undertaken in the optimal season for grassland to ensure habitat condition assessment data was accurate. A further site visit to carry out habitat condition assessments was undertaken on 13 June 2025. Habitats were mapped using the UK Habitat Classification System Version 2.0 (UK Habitat Classification Working Group, 2023) and condition assessments carried out where relevant. This ensured the baseline data was compatible with the Biodiversity Metric which uses UK Habitat Classification data.

Each habitat parcel was given a Unique Polygon Reference (UPR) Number so that each parcel could be referenced individually. The location of each UPR number can be seen on Drawing 2: Baseline Habitat Plan. The condition assessment sheets for each UPR can be found in Appendix B (where applicable). Note UPR 03 (developed land; sealed surface) does not require condition assessments as this is a very low distinctiveness habitat and is pre-populated as NA in the metric.

2.2 Biodiversity Net Gain Assessment

The method applied followed the steps below to ensure sufficient data was available to populate the Statutory Biodiversity Metric calculation tool. The Biodiversity Metric uses habitats to describe biodiversity.

These habitats are converted into measurable ‘biodiversity units’. The metric uses habitat areas as its measurement, except for hedgerow/lines of trees and watercourse habitats where length is used. Habitat units, Linear units or Watercourse units are calculated using the size or length of a parcel of habitat and its quality. Habitats that are scarce or declining typically score highly relative to habitats that are more common and widespread. The biodiversity unit value of a habitat parcel is assessed by its ‘quality’.

It should be noted that there are no watercourses or linear habitats within the site boundary and therefore only habitat units are applicable to this assessment.

2.2.1 Distinctiveness, Condition and Strategic Significance

The assessment comprises three components: Distinctiveness, Condition and Strategic Significance as defined in The Statutory Biodiversity Metric User Guide (DEFRA, 2024b). These are explained further below.

Distinctiveness

A measure based on the type of habitat and its distinguishing features. This includes:

- Consideration of species richness and rarity;
- The extent to which the habitat is protected by designations; and
- The degree to which a habitat supports species rarely found in other habitats.

Existing habitat types within the site are inputted into the metric calculation tool and habitats are given pre-set scores based on their distinctiveness (Very High, High, Medium, Low, Very Low).

Condition

Each habitat type is given a condition weighting using the habitat condition sheet criteria provided in the Statutory Biodiversity Metric *Technical Annex 1: Condition Assessment Sheets and Methodology* (DEFRA, 2004c). The appropriate condition sheet for each habitat was chosen following the guidance therein. Condition is a measure of the habitat against its ecological optimum state. A number of parameters are assessed for each different habitat and then a condition of good, moderate, or poor can be determined from the number of criteria passed including any criteria assessed as being essential for certain habitats.

Strategic Significance

Strategic significance gives additional unit value to habitats that are located within the preferred locations for biodiversity and environmental objectives. Where a Local Nature Recovery Strategy (LNRS) has been published, the relevant strategy and descriptions in Table 7 in The Statutory Metric User Guide (DEFRA, 2024b) should be used to assign strategic significance. If a LNRS has not yet been published, the relevant local planning authority should specify alternative documents to use (examples include local plans or biodiversity action plans), and strategic significance assigned in accordance with Table 8 in The Statutory Metric User Guide.

2.2.2 Metric Rules

When completing the Biodiversity Metric, the following rules must be followed to claim a biodiversity net gain – see Table 2 (adapted from The Statutory Metric User Guide (DEFRA, 2024b).

Table 2: Biodiversity Metric Rules

Rule	Rule Detail
Rule 1	The trading rules of the biodiversity metric must be followed; trading rules set minimum habitat creation and enhancement requirements to compensate for specific habitat losses. These trading rules are detailed in Table 3 of the User Guide.
Rule 2	Biodiversity unit outputs, for each type of unit must not be summed, traded, or converted between types. The requirement to deliver at least a 10% net gain applies to each type of unit.
Rule 3	To accurately apply the biodiversity metric formula, you must use the statutory biodiversity metric calculation tool or small sites metric tool for small sites. The tools remove the need for a user to manually calculate the change in biodiversity value. The tool will summarise

Rule	Rule Detail
	the results of the calculation and inform a user whether the biodiversity net gain objective has been met.
Rule 4	In exceptional ecological circumstances, deviation from this biodiversity metric methodology may be permitted by the relevant planning authority.

2.3 Sources of Baseline Habitat Data

Results from the UK Hab Survey (Peach Ecology, 2025) were used to inform the baseline assessment and the condition assessments. All habitats were digitized, and areas were measured for the BNG assessment using QGIS software. The BNG calculations included all habitats within the site boundary. No irreplaceable habitats were recorded on site.

2.4 Sources of Post-development Habitat Data

The Post-development Habitat Plan (See Drawing 3) was informed by the proposed site layout plan provided in Appendix C. Habitats post development were mapped using the UK Habitat Classification system, to allow data to be populated in the Statutory Biodiversity Metric calculation tool. Area calculations for the Post-development Habitat Plan were also measured using QGIS software.

3. Results

3.1 Baseline Habitats – On Site

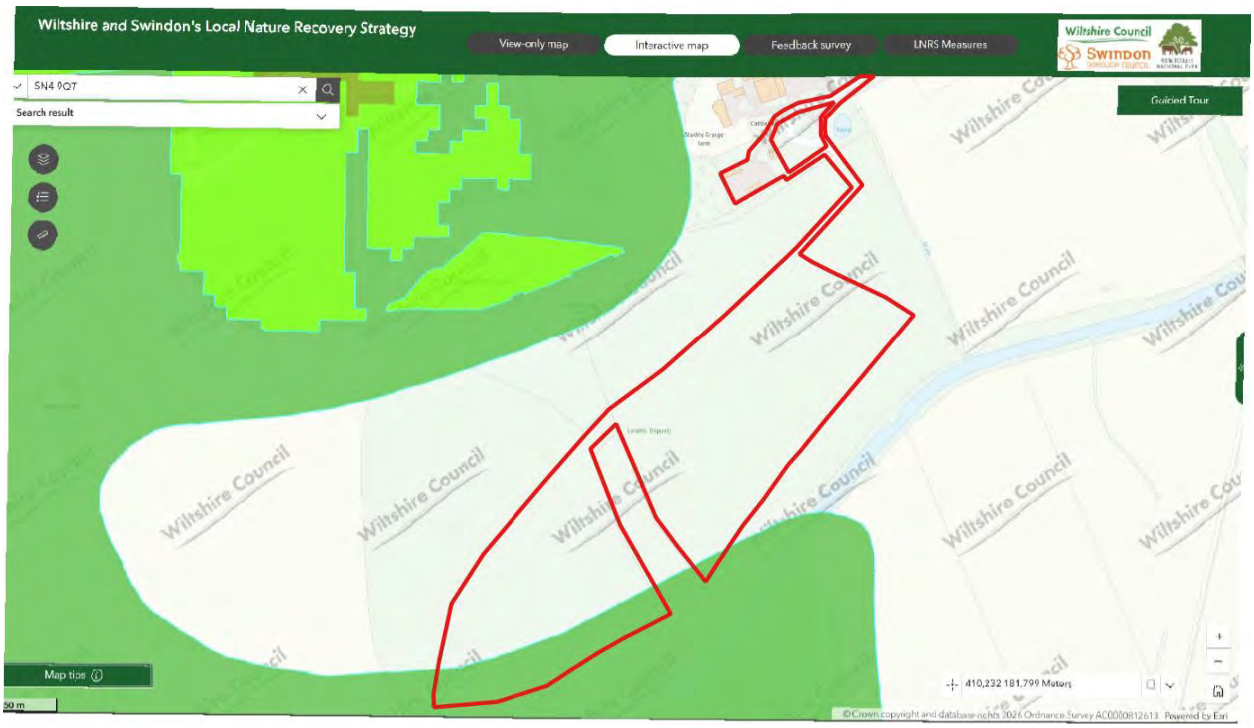
Full descriptions of the habitats on the site are provided in the Preliminary Ecological Appraisal Report (Peach Ecology, 2025). The majority of the site was dominated by a modified grassland field grazed by sheep (UPR 01). A small area of tall forbs was present to the west of the access track (UPR 02) close to the current gas compound. A gas compound and an existing access road (UPR 03) are both classified as developed land; sealed surface. The locations of habitats are presented on Drawing 2: Baseline Habitat Plan.

3.2 Quantitative Assessment Results

3.2.1 Strategic Significance

The Local Nature Recovery Strategy (LNRS) for Wiltshire and Swindon has been approved and is available to view online (Wiltshire Council, 2025). An online map is available showing the areas in the region which are of particular importance for biodiversity, and are therefore strategically important (Wiltshire Council [online]). An extract from the online map that shows the location of the site can be seen on Figure 1. The majority of the site lies outside areas of particular importance for biodiversity on the interactive map. The very south of the site boundary is within the green zone (areas identified for woodland creation), however no woodland creation is planned for the site, therefore the site has been classed as not being in a strategically significant area within either the baseline or post development assessment in the metric.

Figure 1: Local Nature Recovery Strategy Habitat Map (Coloured areas show habitats of importance for nature recovery. Red line shows proposed site boundary)



3.2.2 Baseline Habitats

The Statutory Metric calculation tool was completed on on 17 March 2026. Table 3 sets summarises the baseline habitats on the site. Full calculations showing distinctiveness (pre-set scores), condition and strategic significance can be seen in Tab A-1 of the accompanying Statutory Biodiversity Metric calculation tool in Appendix D. The proposed interventions are fully detailed in Tables 4 (for habitats to be created) and Table 5 (for habitats to be enhanced).

Condition assessments for the relevant habitats can be found in Appendix B.

Table 3: Summary of Baseline Habitats

Baseline Habitat	Area in Baseline (hectares)	Condition	Baseline Habitat Units	Location/ Ecological Features	Proposed Intervention	Area/Units Retained	Area/Units Enhanced	Area/Units Lost
Modified grassland (UPR 01)	5.70 ha	Poor	11.40	Sheep grazed field dominated by grass species with few forbs or wildflowers recorded. This habitat has low ecological value.	The grassland will be mostly retained under the solar panels (PD 01 and PD 02). The edge of the solar fields will be enhanced to other neutral grassland (PD 03) (see Table 5 for full details) and a small area will be lost to create an access track (PD 04).	4.60 ha/ 9.20 units	0.80 ha/ 1.60 units	0.30 ha/ 0.60 units
Sparsely vegetated urban land; Tall forbs (UPR 02)	0.05 ha	Good	0.30	Unmanaged area of tall forbs growing adjacent to current gas compound.	Habitat will be lost to make way for site compound.	Nil	Nil	0.05 ha/ 0.30 units
Developed land; sealed surface (UPR 03)	0.70 ha	NA	0.00	Buildings and associated infrastructure in gas compound and existing access track.	Retained access road and hardstanding in gas compound.	0.70 ha/ 0.00 units	Nil	Nil

Baseline Habitat	Area in Baseline (hectares)	Condition	Baseline Habitat Units	Location/ Ecological Features	Proposed Intervention	Area/Units Retained	Area/Units Enhanced	Area/Units Lost
Totals	6.45 ha	-	11.70	-	-	5.30 ha / 9.20 units	0.80 ha / 0.30 units	0.35 ha / 0.90 units

3.2.3 Post – Development Habitats

Post-development habitats (PD) are presented on Drawing 3. The post-development calculations for habitats are summarised in Table 4 for habitats to be created and Table 5 for habitats to be enhanced.

Full calculations for habitats with target condition, delay in creation, if applicable, and risk multipliers are shown in Tabs A-2 and A-3 in the accompanying Biodiversity Metric calculation tool (Appendix D).

Table 4: Summary of Post-development Habitats - Creation

Habitat Type	Key Features	Likely Condition Achieved and Explanation	Area of Habitat	Habitat Units
Artificial unvegetated; unsealed surface (PD 04)	A new access track that will be created to the north of the solar panels.	NA – the condition of this type of habitat is preset within the metric.	0.30 ha	0.00
Developed land; sealed surface (PD 05)	This is the solar site compound and will be a collection of buildings, infrastructure and hardstanding.	NA – the condition of this type of habitat is preset within the metric.	0.05 ha	0.00
Totals	-	-	0.35 ha	0.00 units

Table 5: Summary of Post-development Habitats - Enhancements

Baseline Habitat	Baseline Condition	Proposed Habitat	Likely Condition Achieved and Explanation	Area of Habitat	Habitat Units in Baseline	Habitat Units Post development	Change
Modified grassland (UPR 01)	Poor	Other neutral grassland (PD 03)	Moderate – as biosolids have previously been added to the grassland in this area of the site it is unlikely to support the creation of high distinctiveness grassland such as lowland meadow as the phosphorous levels are likely too high. Ideally for wildflower grassland Index 0 or 1 is preferable. However, the area is likely to be able to support an other neutral grassland seed mix. The modified grassland and topsoil should be removed and then the subsoil seeded with an other neutral grassland seed mix. As this is an area of continuous grassland around the peripheries of the solar site, and will not be shaded, moderate condition with appropriate cutting regimes (e.g cut twice per year once in April and again in late August-September) should be achievable. A longer sward should be allowed to develop adjacent to the security fence to create a mosaic grassland.	0.80 ha	1.60	4.96	3.36
			Totals	20.67 ha	1.60	4.96	3.36

3.3 Change in Biodiversity

Table 6 sets out the predicted change in biodiversity units for habitat features. A full summary of the overall change in biodiversity units, with the percentage change from baseline for each habitat type, and outcome of net loss, no net loss or net gain can be found in the accompanying Biodiversity Metric calculation tool in Appendix D, a summary table extract from the Biodiversity Metric headline results is presented in Figure 2.

Table 6: Change in Biodiversity Units (Habitats)

Baseline habitat units at the site (A)	+ 11.70
Baseline habitat units lost (B)	- 0.90
Habitat units created from enhancement works (C)	+ 3.36
Habitat units created on site (D)	+ 0. 00
Post-development habitat biodiversity units (A -B+C+D=E)	= 14.16
Change in habitat biodiversity units (E – A)	**+2.46**

The conclusion of the BNG assessment is that the proposed development will achieve a net gain for area based units, with an increase of 21.04 % from the baseline total.

No hedgerows or watercourses were present on site therefore no targets for these habitats are required.

Figure 2: Biodiversity Metric Headline Results

Studley Grange Solar Farm

Headline Results

Scroll down for final results ⚠

Return to results menu

On-site baseline	Area habitat units	11.70	
	Hedgerow units	0.00	
	Watercourse units	0.00	
On-site post-intervention (Including habitat retention, creation & enhancement)	Area habitat units	14.16	
	Hedgerow units	0.00	
	Watercourse units	0.00	
On-site net change (units & percentage)	Area habitat units	2.46	21.04%
	Hedgerow units	0.00	0.00%
	Watercourse units	0.00	0.00%
Off-site baseline	Area habitat units	0.00	
	Hedgerow units	0.00	
	Watercourse units	0.00	
Off-site post-intervention (Including habitat retention, creation & enhancement)	Area habitat units	0.00	
	Hedgerow units	0.00	
	Watercourse units	0.00	
Off-site net change (units & percentage)	Area habitat units	0.00	0.00%
	Hedgerow units	0.00	0.00%
	Watercourse units	0.00	0.00%

FINAL RESULTS

Total net unit change (Including all on-site & off-site habitat retention, creation & enhancement)	Area habitat units	2.46
	Hedgerow units	0.00
	Watercourse units	0.00
Total net % change (Including all on-site & off-site habitat retention, creation & enhancement)	Area habitat units	21.04%
	Hedgerow units	0.00%
	Watercourse units	0.00%
Trading rules satisfied?	Yes ✓	

Unit Type	Target	Baseline Units	Units Required	Unit Deficit	
Area habitat units	10.00%	11.70	12.87	0.00	No additional area habitat units required to meet target ✓
Hedgerow units	10.00%	0.00	0.00	0.00	No additional hedgerow units required to meet target ✓
Watercourse units	10.00%	0.00	0.00	0.00	No additional watercourse units required to meet target ✓

4. Evaluation and Recommendations

A UK HAB survey was undertaken on 08 April 2025, and condition assessment data collected on 13 June 2025. The Statutory Biodiversity Metric, which calculates the pre-development biodiversity value of the onsite habitats was completed on on 17 March 2026. A post-development biodiversity value was generated to assess feasibility of BNG under the proposed plans.

Considering the proposed plans for the site, the development would result in a net gain (21.04 %) in habitat biodiversity units.

No known degradation of habitats has occurred since these assessments were undertaken.

No irreplaceable habitat or statutory designated sites are impacted by the proposed development.

Table 6 and 7 below assess how the development has addressed the Good Practice Principles and if the Metric Rules have been followed and reasons if not.

Table 6: Good Practice Principles

Good Practice Principles	How they have been implemented
1. Apply the Mitigation Hierarchy	The scheme was designed so that only low-quality habitats such as modified grassland and tall forbs are being lost.
2. Avoid losing biodiversity that cannot be offset by gains elsewhere	No irreplaceable habitats are being lost. Small areas of poor-quality habitat is being lost, but these are being offset by the proposed enhancements.
3.Be inclusive and equitable	The client has been inherently involved in designing the enhancement scheme for BNG.
4.Address risks	The Statutory Biodiversity Metric has a difficulty multiplier built in which considers the associated risks of creating or enhancing new habitat. Only low risk habitat enhancements are being proposed. It is possible that moderate condition grassland could be achieved around the solar arrays but as a precaution it has been assumed the fields would only be poor condition.
5.Make a measurable Net Gain contribution	A net gain in habitats has been achieved on site. A 21.04% gain for habitats which is above the 10% which is required under statutory BNG requirements.
6.Achieve the best outcomes for biodiversity	The proposed habitat creation and enhancement works will provide habitat for numerous species of invertebrate, birds and small mammals already likely to be present in the wider area.
7.Be additional	The current habitat enhancement scheme will offer an improvement to the biodiversity value of the site compared to its current state once enhancement works have taken place.
8.Create a Net Gain legacy	The habitat creation/enhancements will be managed and funded by the landowner on a long-term basis. A biodiversity management plan will be developed to ensure the habitats and managed in the long term.

9.Optimise sustainability	Development of a management plan will ensure that net gain will be prioritised.
10.Be transparent	The BNG assessment has been delivered in a transparent and timely manner.

Table 7: Biodiversity Metric Rules

Rule	Has Rule Been Met
Rule 1	Yes –there are no trading errors within the metric (see Appendix D). Modified grassland will be retained or enhanced to other neutral grassland with a small area lost to create a access road.
Rule 2	Yes – habitats have been assessed and achieved over a 10% gain. No hedgerows or watercourses are present within the site and therefore these units are not applicable to this assessment.
Rule 3	Yes – statutory metric has been used - see accompanying metric in Appendix D.
Rule 4	NA – no exceptional circumstances.

5. References

CIEEM, CIRIA, IEMA (2016) *Biodiversity Net Gain: Good practice principles for development* [online]. Available at: https://cieem.net/wp-content/uploads/2019/02/Biodiversity-Net-Gain-Principles.pdf [accessed March 2026].

CIEEM (2021) *Good Practice Requirements for Delivering Biodiversity Net Gain (On- and Off-Site)* [online]. Available at: https://cieem.net/wp-content/uploads/2021/07/CIEEM-Good-Practice-Requirements-for-Delivering-Biodiversity-Net-Gain-On-and-Off-Site-July2021.pdf [accessed March 2026].

Department for Environment Food and Rural Affairs (2024a) *The Statutory Biodiversity Metric: Calculation Tool* [online]. Available at: https://view.officeapps.live.com/op/view.aspx?src=https%3A%2F%2Fassets.publishing.service.gov.uk%2Fmedia%2F65c60e5114b83c000ca715f4%2FThe_Statutory_Biodiversity_Metric_Calculation_Tool_-_Macro_enabled_02.24.xlsm&wdOrigin=BROWSELINK [accessed March 2026].

Department for Environment Food and Rural Affairs (2024b) *The Statutory Biodiversity Metric User Guide*. Available at: - https://assets.publishing.service.gov.uk/media/65c60e0514b83c000ca715f3/The_Statutory_Biodiversity_Metric_-_User_Guide_.pdf [accessed March 2026].

Department for Environment Food and Rural Affairs (2024c) *Statutory Biodiversity Metric – Technical Annex 1 – Condition Assessment Sheets and Methodology*. Available at: https://view.officeapps.live.com/op/view.aspx?src=https%3A%2F%2Fassets.publishing.service.gov.uk%2Fmedia%2F65c60f00cc433b000ca90b33%2FStatutory_Biodiversity_Metric_Condition_Assessments-_Feb24.xlsx&wdOrigin=BROWSELINK [accessed March 2026].

HMSO (1990) *The Town and Country Planning Act 1990*. Available at: https://www.legislation.gov.uk/ukpga/1990/8/contents [accessed March 2026].

HMSO (2021) *The Environment Act 2021.* Available at: https://www.legislation.gov.uk/ukpga/2021/30/contents/enacted [accessed March 2026].

HMSO (2024a) *The Biodiversity Gain Requirements (Exemptions) Regulations 2024.* Available at: https://www.legislation.gov.uk/uksi/2024/47/contents/made [accessed March 2026].

HMSO (2024b) *The Biodiversity Gain (Town and Country Planning) (Modifications and Amendments) (England) Regulations 2024*. Available at: https://www.legislation.gov.uk/uksi/2024/50/contents/made [accessed March 2026].

HMSO (2024c) *The Biodiversity Gain Requirements (Irreplaceable Habitat) Regulations 2024*. Available at: https://www.legislation.gov.uk/uksi/2024/48/contents/made [accessed March 2026].

Ministry of Housing, Communities and Local Government (2023) *National Planning Policy Framework.* Available at: https://www.gov.uk/government/publications/national-planning-policy-framework--2 [accessed March 2026].

Peach Ecology (2025) *Studley Grange Biffa Site, Hay Lane, Wroughton, SN4 9QT . Preliminary Ecological Appraisal Report*. Unpublished Report. Report Number 0834.

UK Habitats Classification Working Group (2023) *The UK Habitats Classification: Habitat Definitions Version 2* [online]. Available at: https://www3.ecountability.co.uk/ukhabworkinggroup-ukhab/ [accessed July 2025].

Wiltshire Council [online] *Wiltshire Local Nature Recovery Strategy Map*. Available at: https://experience.arcgis.com/experience/2b3a19902e3e4b81bac90326a2a2dec5/page/View-only-map?draft=true&views=View-4#data_s=id%3AdataSource_12-19209d14036-layer-6-0%3A2864801%2Cid%3AdataSource_12-1983c8d7fdc-layer-31-19841238feb-layer-31-0-1%3A1%2Cid%3AdataSource_18-1997bece863-layer-41-0%3A3572827%2Cid%3AdataSource_18-1997105fe34-layer-101-19865de85c6-layer-29-19865ddcd42-layer-28%3A876%2Cid%3Awidget_250_output_config_1%3A0 [accessed March 2026].

Wiltshire Council (2025) *Wiltshire and Swindon Local Nature Recovery Strategy*. Available at: https://www.wiltshire.gov.uk/media/18289/Local-Nature-Recovery-Strategy-for-Wiltshire-and-Swindon/pdf/Revised_Copy_of_Local_Nature_Recovery_Strategy_for_Wiltshire_and_Swindon_landscape-compressed.pdf?m=1761560522870 [accessed March 2026]

Drawings

Drawing 1 – Site Location

Drawing 2 – Baseline Habitat Plan

Drawing 3 – Post-development Habitat Plan

Legend

Proposed Site Boundary

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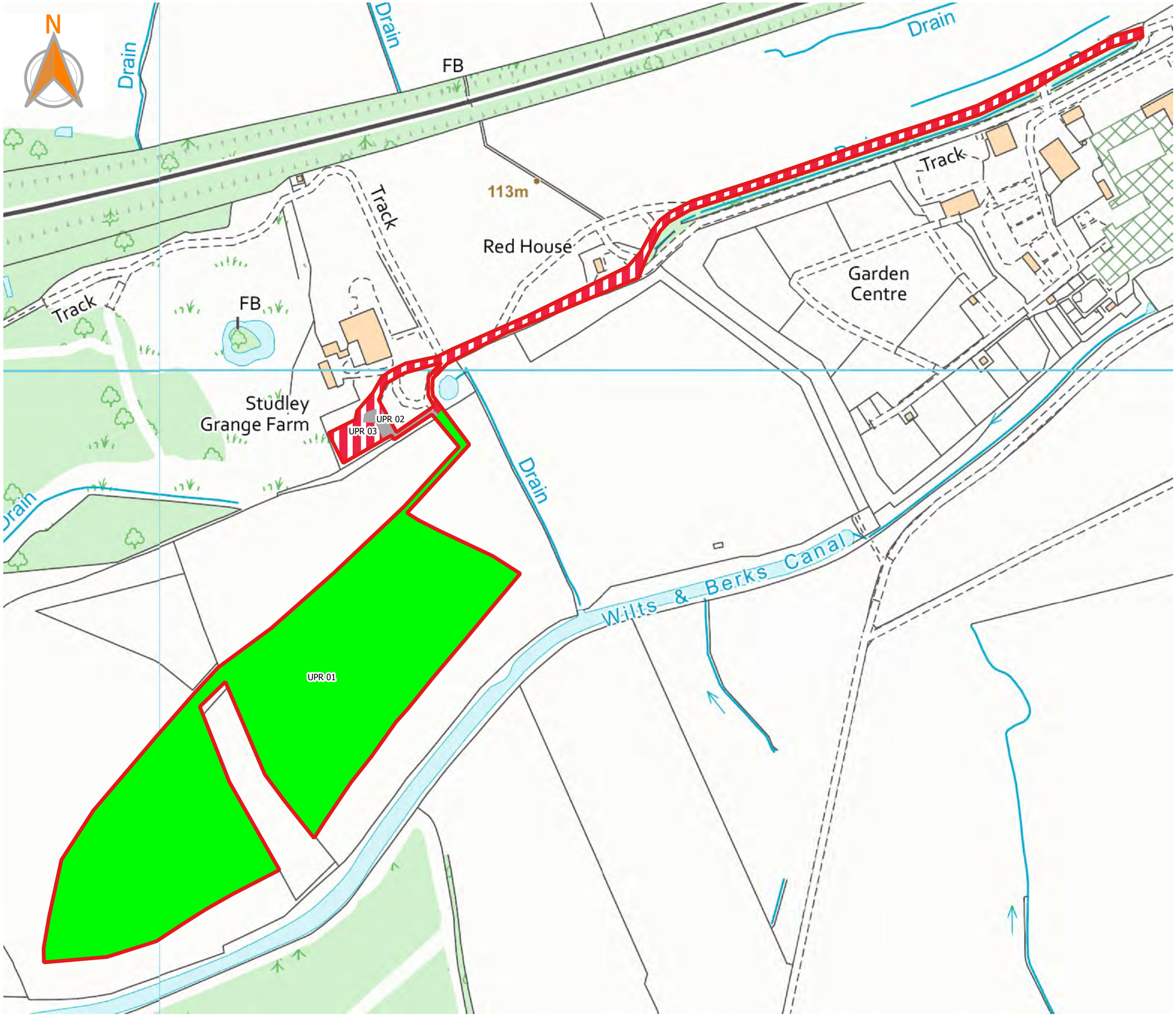
Client Heatons	
Project Studley Grange Solar Scheme	
Title Site Location	
Project Number 2025/002	Date 17/03/2026
AB Ecology	Drawing No 1



Legend

Proposed Site Boundary

Baseline Habitat

Modified grassland

Sparsley vegetated urban land; tall forbs

Developed land; seal;ed surface

UPR 01 - Unique Polygon Reference Number

Scale @ A3 1:3000

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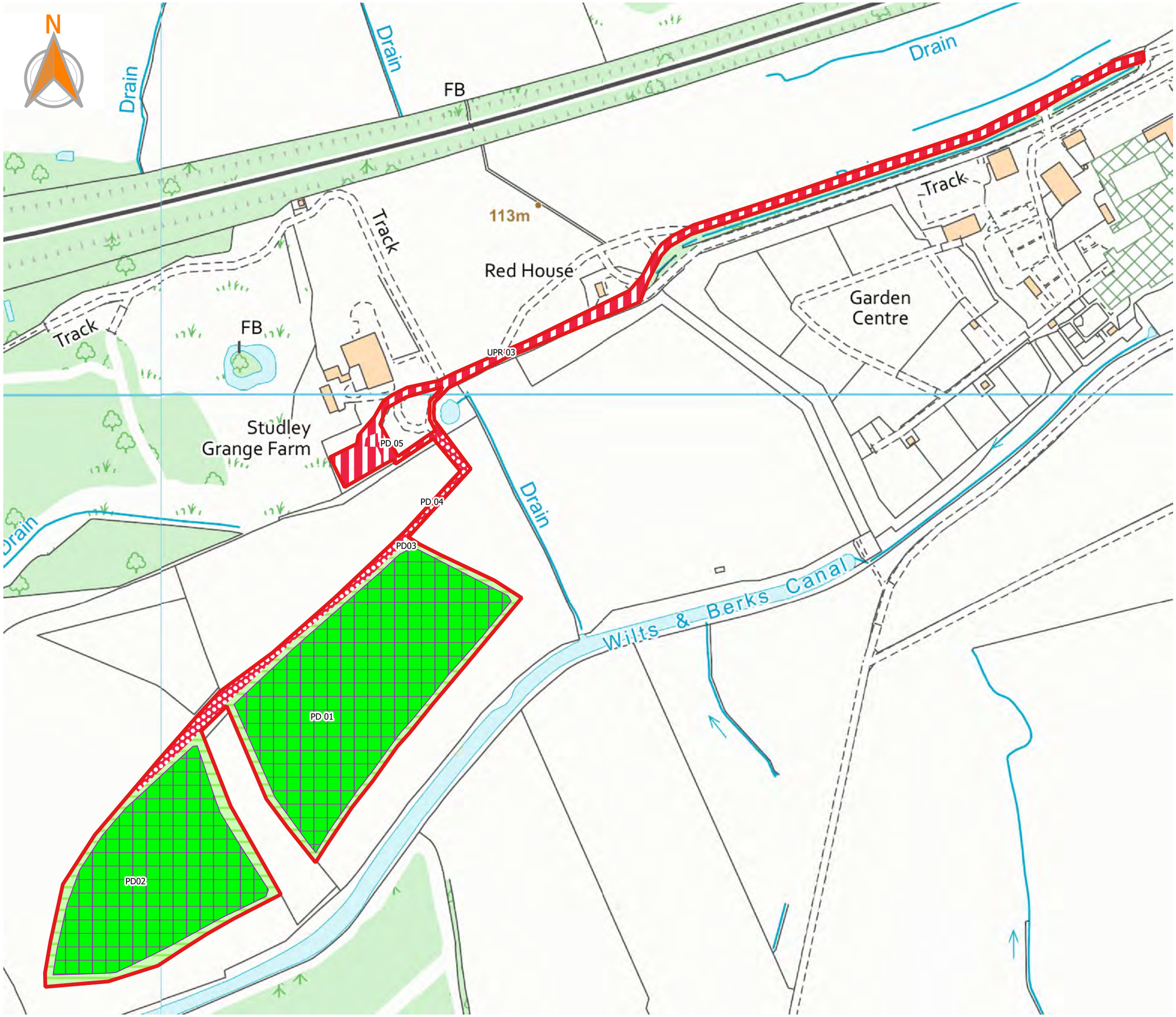
Client Heatons	
Project Studley Grange Solar Scheme	
Title Baseline Habitat Plan	
Project Number 2025/002	Date 17/03/2026
AB Ecology	Drawing Number 2



Legend

- Proposed Site Boundary
- Approximate Location of Solar Panels

Post-development Habitats

- Other neutral grassland
- Modified grassland
- Developed land; sealed surface
- Artifically unvegetated; unsealed surface

UPR 01 - Unique Polygon Reference Number
PD 01 - Post Development Reference Number

Scale @ A3 1:3000

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Client: Heatons	
Project: Studley Grange Solar Scheme	
Title: Post-development Habitat Plan	
Project Number: 2025/002	Date: 17/03/2026
AB Ecology	Drawing Number: 3

Appendix A

Legislation

BIODIVERSITY NET GAIN LEGISLATION

Statutory Framework

Biodiversity net gain is a way of creating and improving biodiversity by requiring developments to have a positive impact ('net gain') on biodiversity.

In England, biodiversity net gain is required under a statutory framework introduced by Schedule 7A of the Town and Country Planning Act 1990 (inserted by the Environment Act 2021).

Under the statutory framework for biodiversity net gain (subject to some exceptions) every planning permission granted is deemed to have been granted subject to the condition that the biodiversity gain objective is met ("the biodiversity gain condition"). This objective is for development to deliver at least a 10% increase in biodiversity value relative to the pre-development biodiversity value of the onsite habitats. This increase can be achieved through onsite biodiversity gains, registered offsite biodiversity gains or statutory biodiversity credits.

The biodiversity gain condition is a pre-commencement condition: once planning permission has been granted, a Biodiversity Gain Plan must be submitted and approved by the planning authority prior to commencement of the development. There are exemptions and transitional arrangements which disapply the condition from certain planning permissions, as well as special modifications for planning permissions for phased development and the treatment of irreplaceable habitats.

The statutory framework for biodiversity net gain also includes provisions about information requirements for planning applications and the treatment of the condition on decision notices on the grant of planning permission.

The relevant primary legislation for the statutory framework for BNG is set out under Schedule 7A (Biodiversity Gain in England) of the Town and Country Planning Act 1990. This legislation was inserted into the 1990 Act by Schedule 14 of the Environment Act 2021, and was amended by the Levelling up and Regeneration Act 2023. The Biodiversity Gain (Town and Country Planning) (Consequential Amendments) Regulations 2024 made consequential amendments to other parts of the 1990 Act.

The biodiversity net gain (BNG) regulations most directly relevant to planning are:

- **The Environment Act 2021 (Commencement No.8 and Transitional Provisions) Regulations 2024** (HMSO, 2021) (commence BNG for most types of new planning applications);
- **The Biodiversity Gain Requirements (Exemptions) Regulations 2024** (HMSO 2024a) (prescribe exemptions for categories of development to which BNG does not apply);
- **The Biodiversity Gain (Town and Country Planning) (Modifications and Amendments) (England) Regulations 2024** (HMSO, 2024b)(amendments to include provisions in respect of applications for planning permission and the submission of BNG plans;
- **The Biodiversity Gain Requirements (Irreplaceable Habitat) Regulations 2024** (HMSO, 2024c)(sets out the modifications for irreplaceable habitat).

POLICY

National Planning Policy Framework (NPPF)

The National Planning Policy Framework (NPPF) (Ministry of Housing, Communities and Local Government, 2023) was first published on 27 March 2012 and updated on 24 July 2018, 19 February 2019, 20 July 2021, 5 September 2023 and 19 December 2023. This sets out the government's planning policies for England and how these are expected to be applied. The NPPF states that '*planning policies and decisions should contribute to and enhance the natural and local environment by*:

- *Protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils in a manner commensurate with their statutory status or identified quality in the development plan;*
- *Recognising the intrinsic character and beauty of the countryside and the wider benefits from natural capital and ecosystem services – including the economic and other benefits of the best and most versatile agricultural land, and of trees and woodland;*
- *Maintaining the character of the undeveloped coast, while improving public access to it where appropriate;*
- *Minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures;*
- *Preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability. Development should, wherever possible, help to improve local environmental conditions, such as air and water quality, taking into account relevant information such as river basin management plans; and*
- *Remediating and mitigating despoiled, degraded, derelict, contaminated and unstable land, where appropriate.'*

A list of principles which local planning authorities should follow when determining planning applications is included in the NPPF which includes the following;

- *If significant harm resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused;*
- *Development on land within or outside a Site of Special Scientific Interest, and which is likely to have an adverse effect on it (either individually or in combination with other developments), should not be permitted. The only exception is where the benefits of the development in the location proposed clearly outweigh both its likely impact on the features of the site that make it of special scientific interest, and any broader impacts on the national network of Sites of Species Scientific Interest; and*
- *Development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons and a suitable compensation strategy exists; and development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to incorporate biodiversity improvements in and around developments should be encouraged, especially where this can secure measurable net gains for biodiversity.*

Appendix B

Habitat Condition Assessments

Condition Sheet: GRASSLAND Habitat Type (low distinctiveness)			
UK Habitat Classification (UKHab) Habitat Type			
Grassland - Modified grassland			
On-site or off-site, site name and location	On-site	**Survey date and Surveyor name**	08 April and 13 June 2025- Angus Layton
Limitations (if applicable)		**Survey reference (if relating to a wider survey)**	
Grid reference		**Habitat parcel reference**	UPR 01
Habitat Description			
Modified grassland field currently being intensively grazed by sheep. Historically was a rubbush tip and gas wells are still present within the grassland.			
ukhab – UK Habitat Classification			

	Condition Assessment Criteria	Criterion passed (Yes or No)	Notes (such as justification)
A	There are 6-8 vascular plant species per m^2 present, including at least 2 forbs (these may include those listed in Footnote 1). **Note - this criterion is essential for achieving Moderate or Good condition.** Where the vascular plant species present are characteristic of medium, high or very high distinctiveness grassland, or there are 9 or more of these characteristic species per m^2 (excluding those listed in Footnote 1), please review the full UKHab description to assess whether the grassland should instead be classified as a higher distinctiveness grassland. Where a grassland is classed as medium, high, or very high distinctiveness, please use the relevant condition sheet.	No	Field has been intensively sheep grazed. There are areas where this criteria is achieved but this field was mostly dominated by 2-4 grass species and/or bristly oxtongue where significant poaching has occured.
B	Sward height is varied (at least 20% of the sward is less than 7 cm and at least 20% is more than 7 cm) creating microclimates which provide opportunities for vertebrates and invertebrates to live and breed.	No	Field is currently intensively sheep grazed.
C	Any scrub present accounts for less than 20% of the total grassland area. (Some scattered scrub such as bramble *Rubus fruticosus* agg. may be present). Note - patches of scrub with continuous (more than 90%) cover should be classified as the relevant scrub habitat type.	Yes	No scrub recorded.
D	Physical damage is evident in less than 5% of total grassland area. Examples of physical damage include excessive poaching, damage from machinery use or storage, erosion caused by high levels of access, or any other damaging management activities.	No	Field shows large expanses of excessive poaching from sheep and around gas extraction vents.
E	Cover of bare ground is between 1% and 10%, including localised areas (for example, a concentration of rabbit warrens)[2].	No	Field shows large areas of bare ground due to poaching
F	Cover of bracken *Pteridium aquilinum* is less than 20%.	Yes	Bracken was not recorded in the fields

G	There is an absence of invasive non-native plant species[3] (as listed on Schedule 9 of WCA[4]).	Yes	No invasive plant species were noted in the field
		Essential criterion achieved (Yes or No)	No
		Number of criteria passed	3

Condition Assessment Result (out of 7 criteria)	Condition Assessment Score	Score Achieved ×/✓
Passes 6 or 7 criteria including passing essential criterion A	Good (3)	
Passes 4 or 5 criteria including passing essential criterion A	Moderate (2)	
Passes 3 or fewer criteria; OR Passes 4 - 6 criteria (excluding criterion A)	Poor (1)	Poor

Suggested enhancement interventions to improve condition score

Footnotes

Footnote 1 – Creeping thistle *Cirsium arvense* , spear thistle *Cirsium vulgare* , curled dock *Rumex crispus* , broad-leaved dock *Rumex obtusifolius* , common nettle *Urtica dioica* , creeping buttercup *Ranunculus repens* , greater plantain *Plantago major* , white clover *Trifolium repens* and cow parsley *Anthriscus sylvestris* .

Footnote 2 – For example, this could include small, scattered areas of bare ground allowing establishment of new species, or localised patches where not exceeding 10% cover.

Footnote 3 – Assess this for each distinct habitat parcel. If the distribution of invasive non-native species varies across the habitat, split into parcels accordingly, applying a buffer zone around the invasive non-native species with a size relative to its risk of spread into adjacent habitat, using professional judgement.

Footnote 4 – Wildlife and Countryside Act 1981 (as amended).

Condition Sheet: URBAN Habitat Type

Habitat Types

Sparsely vegetated land - Ruderal/Ephemeral
Sparsely vegetated land - Tall forbs
Urban - Allotments
Urban - Biodiverse green roof
Urban - Bioswale
Urban - Cemeteries and churchyards
Urban - Facade-bound green wall
Urban - Ground based green wall
Urban - Intensive green roof
Urban - Open mosaic habitats on previously developed land
Urban - Rain garden
Urban - Sustainable drainage system (SuDS)
Urban - Vacant or derelict land
Urban - Bare ground

Habitat Description

Sparsely vegetated land - Tall forbs

See the Statutory Biodiversity Metric User Guide for green roofs and UK Habitat Classification (UKHab) for other habitats:			UKHab – UK Habitat Classification
On-site or off-site, site name and location	On site	**Survey date and Surveyor name**	13 June - Gus Layton
Limitations (if applicable)		**Survey reference (if relating to a wider survey)**	
Grid reference		**Habitat parcel reference**	UPR 02

	Condition Assessment Criteria	**Criterion passed (Yes or No)**	**Notes (such as justification)**
Core Criteria - must be assessed for **all urban habitat types**:			
A	Vegetation structure is varied, providing opportunities for vertebrates and invertebrates to live, eat and breed. A single structural habitat component or vegetation type does not account for more than 80% of the total habitat area.	Yes	areas of grass cover, gravel, bare ground and tall forbs
B	The habitat parcel contains different plant species that are beneficial for wildlife, for example flowering species providing nectar sources for a range of invertebrates at different times of year.	Yes	Rosebay willowherb, oxeye daisy, Timothy, Cocksfoot, red fescue, bramble, nettle and teasel are all present.
C	Invasive non-native plant species (listed on Schedule 9 of WCA[1]) and others which are to the detriment of native wildlife (using professional judgement)[2] cover less than 5% of the total vegetated area[3]. **Note - to achieve Good condition, this criterion must be satisfied by a complete absence of invasive non-native species (rather than <5% cover).**	Yes	No invasive species noted
Additional Criterion - must be assessed for **Open mosaic habitat on previously developed land** only:			
D	The parcel shows spatial variation and forms a mosaic of bare substrate PLUS: - At least four early successional communities (a) to (i); Communities: (a) annuals; (b) mosses/liverworts; (c) lichens; (d) ruderals; (e) inundation species; (f) open grassland; (g) flower-rich grassland; (h) heathland, (i) pools.		
Additional Criteria - must be assessed for **Bioswale and SuDS** habitat types only:			
E1	Plant species are mostly native. If non-native species are present, they should not be detrimental to the habitat or native wildlife[4].		
E2	The vegetation is comprised of plant species suited to wetland or riparian situations.		
Additional Criterion - must be assessed for **Intensive green roofs** only:			

F	The roof has a minimum of 50% native and non-native wildflowers. 70% of the roof area is soil and vegetation (including water features).		
Additional Criterion - must be assessed for **Biodiverse green roofs** only:			
G	The roof has a varied depth of 80 – 150 mm; at least 50% is at 150 mm and is planted and seeded with wildflowers and sedums or is pre-prepared with sedums and wildflowers. **Note – to achieve Good condition some additional habitat, such as sand piles, stones, logs etc. are present.**		
		Essential criteria relevant for habitat type achieved (Yes or No)	Yes
		Number of criteria passed	3

Condition Assessment Result	**Condition Assessment Score**	**Score Achieved ×/✓**
Results for habitats requiring assessment of **3 core criteria** only **(all listed urban habitats except Open mosaic habitat on previously developed land, Bioswale, SuDS and Green roofs)**:		
• Passes all 3 core criteria; AND • Meets the requirements for Good condition within criterion C.	Good (3)	Yes
• Passes 2 of 3 core criteria; OR • Passes 3 of 3 core criteria but does not meet the requirements for Good condition within criterion C.	Moderate (2)	
• Passes 0 or 1 of 3 core criteria.	Poor (1)	
Results for **Green roofs** and **Open mosaic habitat on previously developed land** (requiring assessment of **4 criteria** only - core criteria plus additional criterion specified for habitat type):		
• Passes all 3 core criteria; AND • Meets the requirements for Good condition within criterion C; AND • Passes additional criterion relevant to specific habitat type (D, F or G).	Good (3)	
• Passes 2 or 3 of 4 criteria; OR • Passes 4 of 4 criteria but does not meet the requirements for Good condition within criterion C.	Moderate (2)	
• Passes 0 or 1 of 4 criteria.	Poor (1)	
Results for **Bioswale or SuDS** (requiring assessment of **5 criteria** - core criteria plus additional criteria specified for habitat type):		
• Passes all 3 core criteria; AND • Meets the requirements for Good condition within criterion C; AND • Passes all additional criteria relevant to specific habitat type (Group E)	Good (3)	
• Passes 3 or 4 of 5 criteria; OR • Passes 5 of 5 criteria but does not meet the requirements for Good condition within criterion C.	Moderate (2)	
• Passes 2 or fewer of 5 criteria.	Poor (1)	

Suggested enhancement interventions to improve condition score

Footnotes

Appendix C

Proposed Illustrative Site Layout (provided by Biffa)

Solar Site Compound

Existing gas compound fence line re-aligned to accommodate solar compound elements

Site Access, along existing track

Indicative buried cable route (precise route to be determined)

Wiltshire Council Footpath LTRE1

Security Gate

Wiltshire Council Footpath LTRE5

Proposed Pole-Mounted CCTV

Area 2.7ha

Area 1.9ha

Illustrative array of solar PV panels.

Note: layout based on 2m spacing (north-south) between rows, to enable maximum scenario to be assessed.

Legend

- Application Boundary
- Public Right of Way
- Permissive Footpath
- Indicative buried cable route (precise route to be determined)
- Existing Contours (5m intervals)
- Existing Vegetation
- Landfill Restoration Planting
- Illustrative Solar Panel Array
- Proposed PV Field Area
- Proposed Perimeter Security Fence
- Proposed Pole-Mounted CCTV
- Proposed Inverter
- Control Building
- Transformer And Plinth
- Hard Standing
- Switch Gear
- Proposed Grassland Enhancement, around field margins and below /between panels

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REV.	DATE	DRAWN	DESCRIPTION

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PROJECT	Planning
LOCATION	Studley
DRAWING TITLE	Proposed Illustrative Site Layout
DRAWING No.	HEA064–003
COMPUTER REF.	***
DRAWN	H/PLANNING
DATE	12/03/26
SCALE(S)	1:2000 @A3

Appendix D

The Statutory Biodiversity Metric Calculation Tool (provided in Excel Format)