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1.0 EXECUTIVE SUMMARY

Greengage Environmental Ltd (Greengage) was commissioned by Cumberland Council in March 2025 to undertake a Biodiversity Net Gain Assessment (BNGA) to support a planning application at Hodbarrow Nature Reserve and a parcel of land immediately north of the nature reserve proposed for development as a Visitor Centre and car park, located on the south-west coast of Cumbria.

The BNGA aims to quantify the predicted change in biodiversity value of the site using the Statutory Biodiversity Metric (SBM) in light of the proposed development to assess compliance against national and local planning policy and against the Biodiversity Net Gain (BNG) mandate set out in the Environment Act 2021, which states that all planning permissions granted in England (with a few exemptions) will have to deliver at least 10% BNG.

This document is a report of this BNGA to support a planning submission for the site which seeks *"Erection of visitor centre with café/shop, group room, staff/volunteer, toilet facilities and vehicle parking; consolidation, repair and installation of interpretive sculpture to Towsey Hole Windmill; refurbishment of existing Tern Island Hide; new bird hides, pathways, gateway features, street furniture, and demarcation of spaces at existing car park; enhancement of wildlife habitats; associated landscaping and drainage infrastructure; and maintenance of byway with restricted vehicular access -The Iron Line Project."*

The parcel of land immediately to the north of the reserve is proposed for the Visitor Centre and car park and comprises hardstanding, mixed scrub, bramble (*Rubus fruticosus*) scrub and hawthorn (*Crataegus monogyna*) scrub, lowland meadow and lowland calcareous grassland. The wider Hodbarrow Nature Reserve (hereafter referred to as the "nature reserve") extends to 105 hectares (ha) and comprises lagoons, dunes, grasslands and scrubland. The nature reserve is a former iron mine and since 1986 has been owned and managed by the Royal Society for the Protection of Birds (RSPB).

For the purpose of this report the 'planning application boundary' refers to the nature reserve and land proposed for the Visitor Centre and car park excluding the Hodbarrow lagoon, as shown in Appendix A Figure A.1. The planning application boundary extends to 57.91 ha.

The proposals seek to retain 57.36 ha of habitat and lose 0.55 ha of habitat. The inclusion of the entire planning application boundary which would skew the SBM due to the area and types of habitats present and makes delivery of 10% BNG disproportionately difficult/impossible to achieve on-site considering the small scale of the development footprint. As agreed with the Local Planning Authority (LPA) (email dated 4th April 2025) only the areas of habitats that will be impacted (either through loss, enhancement or creation) have been included in the SBM (hereafter referred to as 'the assessment site' (see Figure A.1 Appendix A).

Habitats were first identified during a Preliminary Ecological Appraisal (PEA) (2021)¹ and Addendum PEA (2022)² undertaken by Appletons throughout May and August 2021 and in January 2022. Additionally, a National Vegetation Classification and habitat Condition Assessment was undertaken by FISC Level 6 botanist Joshua Styles in June 2021 and May 2022³. Greengage undertook an updated survey in March 2025 to re-confirm habitats on-site and undertake a Condition Assessment of the habitats within the assessment site.

There is irreplaceable habitat (Coastal Sand Dunes) within the nature reserve however as this area is being retained in its entirety and is not included within the assessment site. As such, it has not been included in the SBM.

Proposed habitat creation includes a total of 0.3971 ha of artificial unvegetated, unsealed surface (which is the formalisation of the paths on-site using natural and permeable materials), a total of 0.0983 ha of developed land; sealed surface (which refers to the Visitor Centre, car park and bird hides) and 0.0122 ha of other green roof (which refers to a sedum roof on the existing bird hide). Additionally, the development seeks to break up 0.0388 ha of existing hardstanding to create lowland meadow. The proposals also include the enhancement of 1.0497 ha of lowland calcareous grassland, 2.9761 ha of mixed scrub and 0.2143 ha of bramble scrub.

The locations, extents, conditions and habitat parcel reference numbers of the pre-development (baseline) and post-development habitats are mapped in Figure A.1 and Figure B.1. The habitat values are split into three categories: area-based 'Habitat Units' (HU), linear-based 'Hedgerow Units' (HeU) and aquatic linear-based 'Watercourse Units' (WU) respectively, where applicable to the assessment site. HeU and WU are not applicable to the assessment site.

The baseline value for the assessment site has been calculated as 52.10 HU and as such 57.31 HU are required to achieve 10% BNG.

The post-development designs the assessment site are predicted to deliver 62.71 HU. This is a net gain of 10.61 HU (equivalent to +20.37% for HU).

The design proposals do meet the BNG Trading Rules for all habitat distinctiveness levels within the assessment site.

It should be noted that the updated site visit was undertaken outside of the optimal botanical season as identified within the 2025 PEA Update⁴. The historical habitat data was used to inform some of the conditions of the habitats on-site and as such this is not considered a significant constraint. An update site walkover during the optimal botanical survey season (May-September) has been recommended, in order to accurately confirm and update the habitat types and conditions to validate the baseline value stated in this report.

Overall, the development could secure the long-term conservation and enhancement of the habitats and species at site through a sustained commitment to management. The absence of suitable management could create risks for some of the sensitive habitats due to successional change or continued degradation from human trampling.

The proposed development will include areas that will significantly contribute to the biodiversity value of the assessment site, including the creation of Lowland meadow and enhancement of Calcareous Grassland. Therefore, a Habitat Management and Monitoring Plan (HMMP) for the habitat retention/enhancement, creation and long term management over 30 years (minimum) will be required for submission to the Local Planning Authority (LPA). When these recommendations are adhered to, the proposals stand to be compliant with legislation and current planning policy.

Upon receiving planning permission, the submission of a Biodiversity Gain Plan (BGP) to the LPA will be required.

Alongside the BNGA, qualitative ecological enhancement recommendations have also been provided which contribute to further increasing the ecological value of the scheme. Refer to Greengage's Ecological Impact Assessment⁵.

2.0 INTRODUCTION

Greengage Environmental Ltd (Greengage) was commissioned by Cumberland Council in March 2025 to undertake a Biodiversity Net Gain Assessment (BNGA) to support a planning application at Hodbarrow Nature Reserve and a parcel of land immediately north of the nature reserve proposed for development as a Visitor Centre and car park, located on the south-west coast of Cumbria.

Under the Environment Act 2021, developments are mandated to achieve a 10% biodiversity net gain (BNG) using the Statutory Biodiversity Metric (SBM), and they may also be required to under local policy. Most Local Planning Authorities (LPA) require a 10% net gain delivered against a site's pre-development (baseline) value. This is determined through assessing the condition of pre-development habitats on the site i.e. calculating the baseline at the BNGA Baseline stage, followed by comparison against the anticipated changes in biodiversity value based on the development proposals.

For the purpose of this report the 'planning application boundary' refers to the nature reserve and land proposed for the Visitor Centre and car park excluding the Hodbarrow lagoon, as shown in Appendix A Figure A.1. The planning application boundary extends to 57.91 hectares (ha).

The proposals seek to retain 57.36 ha of habitats and lose 0.55 ha of habitats. The inclusion of the entire planning application boundary would skew the SBM calculations due to the area and types of habitats present and makes delivery of 10% BNG disproportionately difficult/impossible to achieve on-site considering the small scale of the development footprint. As agreed with the Local Planning Authority (LPA) (email dated 4th April 2025) only the areas of habitats that will be impacted (either through loss, enhancement or creation) which extends to 10.77 ha, have been included in the SBM (hereafter referred to as 'the assessment site') (see Figure A.1 Appendix A).

This BNGA Design Stage report identifies that the 10% BNG target will be reached for the assessment site.

This BNGA has been undertaken in April 2025. Any further changes to the design will impact upon the BNG score and the SBM calculations will need to be updated to reflect such changes. This also carries forward throughout the entire lifetime of the project, including after planning permission has been granted, in and throughout the construction phase. BNG aims to give an accurate reflection of the changes happening on-site.

2.1 SITE DESCRIPTION

The site extends to 57.91 ha and is centred on Ordnance Survey National Grid Reference (OS NGR): SD 17718 78724, OS Co-ordinates 317718, 478724. The assessment site extends to 10.77 ha. Both the site and the assessment site can be seen in Appendix A.

The site is located on the edge of the Duddon Estuary in south-west Cumbria. The site encompasses the Hodbarrow Nature Reserve (hereafter referred to as the 'nature reserve') which extends to 105 ha in total and comprises lagoons, dunes, grasslands and scrubland. However, the Hodbarrow lagoon falls outside the site boundary as the development is on terrestrial habitats only. The location for the proposed Visitor Centre is sited on a pocket of land encompassing approximately 2.1 ha to the north of

the nature reserve which comprises dense scrub, calcareous grassland and an access road which leads to a Household Waste Recycling Centre off-site to the north.

The nature reserve was once a former iron mine which opened in the early 1860s closed in 1968. The majority of buildings associated with the mine have been removed however the reserve is scattered with remnants from the mine in the forms of old stone walls, quarries, lighthouses, beacons and the partial remains of an unsuccessful sea wall. In 1905, a successful attempt at a large tidal breakwater was built to protect the ironworks from the sea and still stands today. Following the mines' closure the area behind the seawall was flooded and formed a, now freshwater, lagoon (Hodbarrow Lagoon) which supports large populations of wintering and breeding wildfowl and waders. The RSPB purchased the nature reserve in 1986 and their management practices include scrub clearance and the creation of limestone slag islands within the lagoon which have successfully encouraged and sustained breeding populations of little terns (*Sternula albifrons*), common terns (*Sterna hirundo*) and sandwich terns (*Thalasseus sandvicensis*). The nature reserve is part of the Duddon Estuary Site of Special Scientific Interest (SSSI) and Morecambe Bay and Duddon Estuary Special Protection Area (SPA), Special Area of Conservation (SAC) and Ramsar site. The populations of breeding terns and wintering wildfowl using Hodbarrow lagoon contribute to the wider designation of Duddon Estuary and Morecambe Bay SPA and Duddon Estuary Ramsar Site.

The nature reserve is part of a popular 3-mile circular walk which takes visitors on paths through the dense willow and bramble scrub, through calcareous grasslands, past the sand dunes and along the sea wall looking out over the Hodbarrow lagoon to the north and the Irish sea to the south. The sea wall loops across to a caravan park 0.3km east of Haverigg. The mosaic of habitats on-site supports rich and diverse plant communities and assemblages of invertebrates.

2.2 PROPOSED DEVELOPMENT

The proposed development seeks to develop a Visitor Centre and car park, repair and install an interpretive sculpture to Towsey Hole Windmill, refurbishment of the existing Tern Hide; new bird hides, pathways, gateway features and street furniture and maintenance of the Byway Open to All Traffic (BOAT). The soft landscaping elements seek enhancement of wildlife habitats. The ecology, heritage and the natural landscape setting have been considered throughout the design process.

Greengage have liaised with the design team on a weekly basis and engaged with the Council, Natural England and RSPB throughout the design process to support an earlier planning application. Greengage have communicated the ecological constraints and opportunities to the design team which has been informed by the Phase II survey results⁷. The designs have been adapted throughout the process as and when any new relevant ecological constraints were identified. The proposals for the updated planning application have followed the same principals as the earlier application and RSPB and Natural England have been kept up to date. The development process has sought to follow the mitigation hierarchy throughout the design stage.

Habitats have been largely retained on-site. First and foremost the development has sought to avoid harm to ecological features. The area of the Visitor Centre and car park has been selected as it is

currently comprised of common and widespread dense scrub habitat. An area of car parking has been moved to avoid Annex I habitat, in light of the 2022 National Vegetation Classification survey⁶.

Plans for a new hide which would involve clearing a large strip of scrub have been abandoned and the new hide will be situated in an area that does not require as much clearance.

Some habitat loss will be required to formalise the paths around the site. These paths have been selected as they are already subject to significant erosion due to disturbance through visitor footfall. These paths require formalisation to ensure the site is accessible to all and through this formalisation, the paths will be narrowed.

The 'Proposed Site Layout' produced by Layer Studio, dated 3rd April 2025, has been used as the basis for information regarding the proposed post-development habitats and has been used to inform the comparison against the baseline values.

This has been supplemented by the following documents:

- 289-LYR-XX-ZZ-DWG-L-1000 [GA _ Site Masterplan] Rev P01; and
- 289-LYR-XX-ZZ-DWG-L-1203 [GA _ Welcome Building 1_200] Rev P02.

The development seeks to secure the long-term conservation and enhancement of the habitats and species at site through a sustained commitment to management; the absence of which could create risks for some of the sensitive habitats due to successional change or continued degradation from human trampling.

3.0 METHODOLOGY

3.1 PRE-DEVELOPMENT (BASELINE ASSESSMENT SITE)

Habitat Data

Habitats on the assessment site were first surveyed by Appletons for the scheme during a Preliminary Ecological Appraisal (PEA) (2021)⁷ and Addendum PEA (2022)⁸ throughout May and August 2021 and in January 2022. Additionally, a National Vegetation Classification and habitat Condition Assessment was undertaken by FISC Level 6 botanist Joshua Styles in June 2021 and May 2022⁶.

Given the time since previous surveys Greengage undertook an updated Preliminary Ecological Appraisal in March 2025 (hereafter referred to as the 2025 PEA Update) in accordance with guidance in the UK Habitat Classification System (UKHab)⁹ and the Chartered Institute of Ecological and Environmental Management (CIEEM) (2017) Guidelines for Preliminary Ecological Appraisal¹⁰, in accordance with British Standard (BS) 42020: 2013: Biodiversity¹¹. The PEA was undertaken to re-confirm habitats on the site and undertake a SBM Condition Assessment (See 'Habitat Condition' below) on the habitats within the development footprint. For habitats outside of the development footprint that could be used for enhancements, where available, the 2021 and 2022 National Vegetation Classification undertaken by Joshua Styles was assessed. Areas of each habitat type were taken from the baseline habitat map within Quantum Geographical Information System (QGIS) software and Computer Aided Design (CAD) (Appendix A) provided by Appletons which were amended to the 2025 PEA Update findings. The assessment site only includes the areas of habitats that will be impacted (either through loss, enhancement or creation) in the SBM, as agreed with the Local Planning Authority (LPA) (email dated 4th April 2025) (see Figure A.1 Appendix A).

Statutory Biodiversity Metric Calculation Tool

This BNGA uses the government mandated methodology within the 'Statutory Biodiversity Metric User Guide' (SBM User Guide), distributed by Department for Food Environment and Rural Affairs (DEFRA), February 2024¹².

BNG uses habitat type and condition as a proxy for overall biodiversity value, measured in Biodiversity Units (BU) which are calculated using the SBM. The BU are separated into area-based Habitat Units (HU), linear-based Hedgerow Units (HeU) and aquatic linear-based Watercourse Units (WU), as applicable to a site, respectively. For the assessment site, HU is applicable.

The following information on each habitat type are the required SBM inputs:

- Type;
- Area/length;
- Condition; and
- Strategic significance.

The areas of each habitat parcel are measured, with each habitat parcel assigned a 'Distinctiveness', 'Condition' and 'Strategic Significance' score. Distinctiveness is a default score for the habitat classification, representing its inherent biodiversity value, whereas condition refers to the state each habitat parcel is in relative to a predetermined set of criteria outlined in the SBM User Guide.

Strategic significance draws upon priorities and objectives within local plans and strategies, and is measured by providing habitats with a score from low to high as follows:

- Low - "area / compensation not in local strategy";
- Medium - "location ecologically desirable but not in local strategy"; and
- High - "formally identified in local strategy".

To calculate the pre-development (baseline) BU value, habitat data collected during the 2025 PEA Update⁵, PEA (2021)¹³ and Addendum PEA (2022)¹⁴ and NVC (2021 and 2022)⁶ has been used. A BNGA habitat map has been created based using shapefiles provided by Appletons and marking up changes to the data collected in the field. The area extents for each habitat type shown in the BNGA habitat map were then measured using QGIS. See Appendix A.

Distinctiveness values were automatically calculated for the assessment site and habitat conditions were assessed both in the field, and retrospectively using site photos.

The irreplaceable habitat, Coastal Sand Dunes, has been identified on the nature reserve however it falls outside of the assessment site. Impacts to this irreplaceable habitat are not measured by the SBM however this habitat will be retained in full and as such no bespoke compensation action is required.

Type and Area/Length

Habitat types documented in the PEA using UKHab classifications and primary codes supplemented by secondary codes, where applicable. The SBM uses a classification system based mainly on the UKHab Classification System⁹ but with input also from other systems including the Water Framework Directive (WFD) Lakes Typology¹⁵, the European Nature Information System (EUNIS) habitat definitions¹⁶, Habitats Directive Annex 1 definitions¹⁷.

As such, UKHab classifications used in the 2025 PEA Update⁵ do not always translate directly into the SBM habitat types that are available for selection within the pre-set drop-down menus. Occasionally UKHab secondary codes provide the key information to be able to allocate the SBM 'best fit' selection for the UKHab habitat type. Habitat conversions that are applicable to the application-site are listed in Table 3.1 below. The SBM classifications are hereafter used throughout the report.

Table 3.1 UKHab to SBM habitat conversions

UKHab Habitat Type	SBM Habitat Type	Reasoning
Quarry- sand and gravel (837)	Artificial littoral coarse sediment	This is relating to a pocket around the existing bird hide along the sea wall. Whilst this habitat was not strictly a quarry, this area is part of a man-made

UKHab Habitat Type	SBM Habitat Type	Reasoning
		landmass that utilised materials from the quarry area to the north. This area was calcareous in nature and sparsely vegetated. Artificial littoral coarse sediment was used as the area has never been a quarry and it does comprise coarser sediment such as gravel and pebbles.
'Artificial Unsealed Surface'	'Artificial Unsealed Surface'	This refers to the existing BOAT and footpath which are in a poor state of repair.

A habitat parcel reference has been applied for each area-based habitat with a Condition Assessment which is cross-referenced within the SBM calculation tool and Figure A.1.

Habitat Condition

Where applicable, habitats were subject to a Condition Assessment in accordance with the SBM Condition Assessments. Formalised copies of the Condition Assessments for the Baseline habitats are provided as Appendix C.

Habitats must be quantified using criteria set out by the SBM Condition Assessments to determine their relative condition.

The condition of a habitat is a measure of the biological 'working-order' of a habitat type judged against the perceived ecological optimum state for that particular habitat.

The condition of each habitat type was assessed against pre-set criteria and categorised as either 'Good', 'Fairly Good', 'Moderate', 'Fairly Poor' or 'Poor'. Where a habitat type varies in condition within the assessment site this was recorded and mapped.

Strategic Significance

The SBM calculation tool accounts for whether the habitat is situated in an area locally identified as significant for nature.

Data on areas and habitats locally identified as significant for nature were obtained from the following:

- Multi-Agency Geographical Information for the Countryside (MAGIC) website for mapped statutory designated sites;
- Cumbria Local Nature Recovery Strategy Local Nature Partnership Habitat Network Maps¹⁸;
- Habitats listed within the Statement of Biodiversity Priorities for Cumbria County Council¹⁹;
- The site falls within the local authority of Cumberland Council which is still subject to the former borough council's, Copeland Local Plan 2021-2039²⁰;

- Catchment Plans;
- National Character Area profiles; and/or,
- Priority Habitats for Restoration.

Areas within the site that fall within the nature reserve, or a mapped designated site (SAC, SPA, Ramsar and SSSI), have been given the highest strategic significance score of 'Formally identified within local strategy'.

Using the SBM calculation tool, habitat values have been calculated based on whether they occur commonly or whether they are rare, their area (ha) (or length (km) for linear features such as hedgerows), condition and importance within the local area, usually identified from local relevant planning policies or documents.

3.2 POST- DEVELOPMENT (ASSESSMENT SITE)

To calculate the post-development BU value, the area extents for each habitat type were measured based on the 'Proposed Site Layout', using Quantum Geographical Information System (QGIS) software. See Appendix B.

Habitat types were inferred from the 'Proposed Site Layout' and discussions with the design team. Where justification for habitat types is required, this has been included in Section 4.0.

Targeted condition scores were assigned by Greengage, using the SBM habitat condition criteria, whilst considering the likely future use of each area on the 'Proposed Site Layout' and what was considered feasible to reach.

In accordance with the BNG Trading Rules, changes in broader habitat types (for example, 'Urban', 'Woodland' and 'Grassland' habitats) are also tracked, and trading habitats is discouraged unless specifically targeted within a local strategy. Trading down of habitats is not permitted.

The definition of 'significant enhancements', in accordance with government guidance²¹ is 'areas of habitat enhancement which contribute significantly to the proposed development's BNG, relative to the biodiversity value before development'.

Retention of existing habitat does not count as an on-site enhancement.

What counts as a significant enhancement will vary depending on the scale of development and existing habitat, but these would normally be:

- habitats of medium or higher distinctiveness in the biodiversity metric;
- habitats of low distinctiveness which create a large number of biodiversity units relative to the biodiversity value of the assessment site before development;
- habitat creation or enhancement where distinctiveness is increased relative to the distinctiveness of the habitat before development;
- areas of habitat creation or enhancement which are significant in area relative to the size of the development;

- enhancements to habitat condition, for example from poor or moderate to good.

3.3 COMPETENCIES

In accordance with 'British Standard: 8683 (BS:8683) Process for designing and implementing biodiversity net gain – Specification', this BNGA and all associated Condition Assessments have been completed by competent, suitability trained and qualified ecologists.

Laura Thomas, Senior Consultant, has an undergraduate degree in Biology (BSc Hons) and a Master's degree in Evolutionary and Behavioural Ecology, holds a Natural England Bat Survey Level 1 Class Licence and is a Qualifying member of CIEEM. Laura has over seven years' experience in the commercial sector.

Abbie Case, Senior Consultant, has a BSc (Hons) in Ecology and Conservation, an MSc in Conservation Biology and is an Associate member of CIEEM. Abbie has seven years in ecological survey and assessment.

Laura Homfray, Associate Consultant, has a BSc (Hons) in International Management and French and MSc in Sustainability and Consultancy. She has over 9 years of experience in her specialist areas of biodiversity net gain, natural capital and ecosystem service assessment. She is a Practitioner member of IEMA.

This report was written by Laura Thomas, reviewed by Abbie Case and verified by Laura Homfray who confirms in writing (see the QA sheet at the front of this report) that the report is in line with the following:

- Represents sound industry practice;
- Reports and recommends correctly, truthfully and objectively;
- Is appropriate given the local site conditions and scope of works proposed; and
- Avoids invalid, biased, and exaggerated statements.

3.4 ASSUMPTIONS

General

The 2025 PEA site walkover was undertaken outside of the optimal botanical growing season (i.e. outside April to August) and as such, condition of the habitats and species listings could not be accurately obtained as required for habitat classification and Condition Assessments. As such the previous Condition Assessments undertaken by Joshua Styles and information from the 2021 and 2022 Appletons PEAs were also assessed in making an assessment on the species present. As such, this is not considered to be a significant constraint however a repeat visit within the optimal botanical season should be undertaken and the baseline calculation updated where applicable to provide the most accurate representation.

Statutory Biodiversity Metric Calculation Tool

Strategic significance for the baseline and post-development habitats (except hard landscaping) has been determined to be high '*Formally identified in local strategy*' for all habitats associated with the nature reserve as this is part of the Duddon Estuary Site of Special Scientific Interest (SSSI) and Morecambe Bay and Duddon Estuary Special Protection Area (SPA), Special Area of Conservation (SAC) and Ramsar site.

For habitats (excluding hard landscaping) associated with the land immediately to the north of the nature reserve, the strategic significance was determined to be medium '*Location ecologically desirable but not in local strategy*' given this area is immediately adjacent to the reserve and could provide connectivity.

All habitats that contribute no BU such as Developed land; sealed surface and Artificial unvegetated, unsealed surface were determined to be low strategic significance '*Area/compensation not in local strategy/ no local strategy*' both pre and post-development.

The condition of the habitats, either for the baseline or that a habitat is considered to be able reach post-development, has been assessed using information within the SBM User Guide and based upon the ecologist's judgement of the habitats/input from the landscape architect.

Where there was no suitable UKHab or SBM habitat classification for a habitat described in the landscaping, a 'best fit' alternative has been used with an explanation given to justify its use in Table 3.2. The conversions described in Table 3.1 remain valid.

Table 3.2 Landscaping plans to SBM habitat conversions

Landscaping Plan	SBM Habitat Type	Reasoning
Natural and permeable path	'Artificial unvegetated; unsealed surface'	This refers to the formalisation of the existing footpath which will comprise natural and permeable materials.
Sedum roof	'Other green roof'	This refers to the sedum roof that will be installed over the existing hide. Other green roof is considered the most appropriate as it has low value for biodiversity and a shallow substrate depth.

Note the sum of the values shown in columns within the BU tables may differ from the total units stated. This is due to rounding and is not considered significant. The totals stated reflect those calculated within the SBM calculation tool, based on the SBM User Guide.

On the Visitor Centre site, habitat clearance of dense scrub has taken place to inform Site Investigations which were required to support the proposals and the designs. As per the SBM User Guide, where habitats on-site have recently been destroyed or degraded it has been decided to use pre-

degradation habitat types as the assessment site's baseline (as is recommended). Greengage were present on-site to oversee the localised scrub clearance and undertook a Condition Assessment prior to clearance. As such, this pre-clearance biodiversity value has been used to these habitats.

4.0 RESULTS

4.1 PRE-DEVELOPMENT (BASELINE)

Designated Sites

The nature reserve is part of the Duddon Estuary SSSI, Morecambe Bay and Duddon Estuary SPA, Morecambe Bay SAC and Duddon Estuary Ramsar site. For best practice, it is acknowledged here that measures to protect these designated sites from impacts by any future development should be undertaken and are fully detailed in the EclA⁵. Full details of the statutory designated sites are shown in the EclA.

Statutory Biodiversity Metric Calculation Tool

Using the SBM calculation tool the baseline biodiversity value of the assessment site has been identified to be 52.10 HU.

A breakdown of the baseline calculations for HU is provided in Table 4.1 below:

Table 4.1 Baseline Habitat Units

Broad Habitat	Habitat Type	Area (Hectares)	Distinctiveness	Strategic significance	Condition	Habitat Units
Grassland	Bracken	0.031	Low	High	Condition Assessment N/A	0.07
Grassland	Lowland calcareous grassland	0.0146	High	High	Good	0.30
Grassland	Lowland calcareous grassland	0.0004	High	High	Moderate	0.01
Grassland	Lowland calcareous grassland	0.8472	High	High	Moderate	11.69
Grassland	Lowland calcareous grassland	0.0198	High	Medium	Moderate	0.26
Grassland	Lowland calcareous grassland	0.2025	High	Medium	Moderate	2.67

Broad Habitat	Habitat Type	Area (Hectares)	Distinctiveness	Strategic significance	Condition	Habitat Units
Grassland	Lowland meadows	0.0021	V.High	Medium	Good	0.06
Grassland	Other neutral grassland	0.028	Medium	High	Good	0.39
Heathland and shrub	Bramble scrub	0.2556	Medium	Medium	Condition Assessment N/A	1.12
Heathland and shrub	Bramble scrub	0.2143	Medium	Medium	Condition Assessment N/A	0.94
Heathland and shrub	Hawthorn scrub	0.0292	Medium	Medium	Moderate	0.26
Heathland and shrub	Mixed scrub	0.6199	Medium	High	Good	0.49
Heathland and shrub	Mixed scrub	0.0916	Medium	High	Moderate	5.70
Heathland and shrub	Mixed scrub	2.3562	Medium	High	Moderate	21.68
Heathland and shrub	Mixed scrub	0.1191	Medium	High	Moderate	1.10
Intertidal sediment	Artificial littoral coarse sediment	1.2213	Low	High	Moderate	5.62
Urban	Artificial unvegetated, unsealed surface	4.6605	V.Low	Low	N/A - Other	0.00

Broad Habitat	Habitat Type	Area (Hectares)	Distinctiveness	Strategic significance	Condition	Habitat Units
Urban	Developed land; sealed surface	0.1402	V.Low	Low	N/A - Other	0.00
					TOTAL	52.10

The above tables have been completed based on the methodologies detailed in Section 3.0 and on application of the below points:

- The pre-development (baseline) habitats have had localised scrub clearance to inform localised Site Investigation Works.
- Greengage were on-site to oversee the scrub clearance and undertook a Condition Assessment of the scrub before clearance and as such the degradation worst case scenario of awarding 'good' condition has not been applied.
- In accordance with the SBM User Guide, 'Developed land; sealed surface', 'Artificial unvegetated, unsealed surface', 'Bramble scrub' and 'Bracken' have no Condition Assessment.
- There are three pockets of 'Lowland calcareous grassland' within the assessment site on the nature reserve. One pocket was given 'good condition' as it did not fail any condition criteria and the remaining two in moderate condition. This is due to failing condition criteria with scrub cover over 5% and presence of occasional invasive species sea buckthorn (*Hippophae rhamnoides*).
- There are two pockets of 'Lowland calcareous grassland' associated with the area proposed for a Visitor Centre and car park that has a condition score of 'moderate' as they failed the condition criteria due to presence of a non-native invasive species, wall Cotoneaster (*Cotoneaster horizontalis*) present and nuisance species horsetail (*Equisetum arvense*), scrub cover over 5% and the cover of bare ground is not between 1-10%. These areas are proposed to be enhanced through the proposals through the removal of invasive species and the scrub clearance to below 5%.
- There is a small pocket of 'Lowland meadow' which was in 'good' condition having met all but one criteria (presence of invasive species wall Cotoneaster and nuisance species field horsetail). The 'Lowland meadow' will be cleared to facilitate the development the Visitor Centre and car park.
- The mixed and bramble scrub only need to fail one criterion to be awarded moderate condition. This criterion was largely that the scrub did not possess clearings, glades or rides however some pockets of scrub also had presence of invasive non-native species sea buckthorn and wall Cotoneaster.
- Artificial littoral coarse sediment was awarded moderate condition as it had the presence of artificial structures that impede the natural movement of water (the sea wall) and presence of invasive non-native species sea buckthorn.

4.2 POST-DEVELOPMENT (PROPOSED)

Based on the 'Proposed Site Layout' drawing, the proposed development is predicted to provide 63.75 HU as shown in Table 4.2.

Table 4.2 Post-Development Habitat Units

Broad Habitat	Habitat Type	Area (Hectares)	Distinctiveness	Strategic Significance	Condition	Habitat Units
Retained						
Intertidal sediment	Artificial littoral coarse sediment	1.2213	Moderate	High	Moderate	5.62
Urban	Artificial unvegetated, unsealed surface	4.6605	N/A - Other	Low	N/A - Other	0.00
Urban	Developed land; sealed surface	0.1014	N/A - Other	Low	N/A - Other	0.00
Created						
Grassland	Lowland meadows	0.0388	V.High	Medium	Moderate	0.15
Urban	Artificial unvegetated, unsealed surface	0.1026	V.Low	Low	N/A - Other	0.00
Urban	Artificial unvegetated, unsealed surface	0.0133	V.Low	Low	N/A - Other	0.00
Urban	Developed land; sealed surface	0.0983	V.Low	Low	N/A - Other	0.00
Urban	Developed land; sealed surface	0.2812	V.Low	Low	N/A - Other	0.00

Broad Habitat	Habitat Type	Area (Hectares)	Distinctiveness	Strategic Significance	Condition	Habitat Units
Urban	Other green roof	0.0122	Condition Assessment N/A	High	Condition Assessment N/A	0.03
Enhanced						
Grassland	Lowland calcareous grassland	0.8472	High	High	Good	12.95
Grassland	Lowland calcareous grassland	0.2025	High	Medium	Good	2.96
Heathland and shrub	Bramble to Mixed scrub	0.2143	Medium	Medium	Good	2.17
Heathland and shrub	Mixed scrub	0.6199	Medium	High	Good	8.09
Heathland and shrub	Mixed scrub	2.3562	Medium	High	Good	30.75
*Urban trees and green walls are not included in the total site area to avoid double counting					TOTAL	62.71

The above tables have been completed based on the methodologies detailed in Section 3.0 and on application of the below points:

- In accordance with the SBM User Guide, 'Developed land; sealed surface' and 'Artificial unvegetated, unsealed surface' do not have a Condition Assessment. New areas of 'Artificial unvegetated, unsealed surface' will be created as formalised paths up to the new tern hides or the Towsey Hole Windmill. These will be created using natural and permeable materials. The 'Developed land; sealed surface' created refers to the new Visitor Centre and car park as well as three new bird hides.
- The retained area of 'Artificial littoral coarse sediment' is associated with the area surrounding the existing bird hide. The works in this area involve reducing the desire lines to one footpath to the existing bird hide.
- 'Lowland meadow' will be created in an area of the existing hardstanding layby. This area will be broken up and removed and sown with the surrounding seedbank. As proposals seek to re-create the habitat within the same environmental context and adjacent geographic position within the

landscape, it is considered realistically achievable to re-create this habitat. It will remain adjacent to retained pockets of lowland meadows and retain ecological functionality within the wider landscape. It should be monitored to ensure that any invasive/nuisance species are removed and that scrub encroachment does not exceed over 5%. As a precaution, it is expected to achieve at least 'Moderate' condition. Seeding from an adjacent area of retained lowland meadow should be used if monitoring exercises show that the species composition does not match the UKHab description as per essential Criterion A (see Appendix C Table C.1).

- The pockets of moderate 'Lowland calcareous grassland' will be enhanced from moderate to good through the removal of invasive and nuisance species as well as the reduction of scrub cover to less than 5%. For existing areas of 'Lowland calcareous grassland' which are not achieving the essential criterion, seeds from the neighbouring habitat will be harvested after flowering and will be sown in these area in early Autumn to keep bare ground between 1 and 10% and help meet the UKHab description as per essential Criterion A (see Appendix C Table C.1).
- The pockets of 'Mixed scrub' will be enhanced from moderate to good condition through the removal of invasive and nuisance species within the nature reserve as well as rotational management to increase age and structural diversity as well as create glades, clearings and rides surrounding the Visitor Centre and car park.
- The pocket of 'Bramble scrub' will be enhanced to 'Mixed scrub' through the inclusion of other woody species identified on the site such hawthorn (*Crataegus monogyna*), goat willow (*Salix caprea*), grey willow (*Salix cinerea*), gorse (*Ulex sp.*), broom (*Cytisus scoparius*) and dog rose (*Rosa canina*). It should be monitored to ensure the removal of invasive and nuisance species as well as rotationally managed to increase age and structural diversity as well as create glades, clearings and rides.

5.0 EVALUATION AND DISCUSSION

Under the proposals, as set out in the 'Proposed Layout' drawing, and in the absence of additional enhancement measures and habitat creation, the development is predicted to deliver 62.71 HU, which is an increase of 10.61 HU. This corresponds to an equivalent 20.37% BNG. All BNG Trading Rules have also been satisfied. A copy of the SBM calculation tool outputs is being submitted with the planning application. The proposals are therefore in compliance with local and national planning policy (see Appendix D).

As the proposals involve the creation and enhancement of very high and high distinctiveness habitats, the production of a Habitat Management and Monitoring Plan (HMMP) is appropriate to set out the actions required to manage and maintain the habitats to maximise their biodiversity value over the long term (30 years minimum).

Further qualitative ecological enhancement as recommended in the EcIA⁵ should ideally also be targeted on-site through the provision of reptile and amphibian refugia and hibernacula, invertebrate habitat features (such as pollinator posts), bird boxes (such as for garden birds) and bat boxes, to help protect nationally and locally important species, including those specified in national, regional and local Biodiversity Action Plans.

5.1 ADDITIONALITY OF ENHANCEMENTS

'Additionality' in BNG is the principle that ensures that measures counted towards the BNG requirement for a planning application should not comprise interventions that would have occurred anyway including through existing site management requirements.

In the case of the assessment site, the majority of habitat enhancement is taking place on the Visitor Centre and car park site which is currently not managed at all. As such, all enhancement taking place in these areas would be considered additional to current management and these areas are not considered in the paragraphs below. The paragraphs below set out why the enhancement measures proposed within the nature reserve are believed to be additional to the current management regime.

For enhancements on the nature reserve, Greengage has considered the Business as Usual management of the site. Greengage reviewed the RSPB Hodbarrow Management Plan 2020/21-2025/26²² which identifies scrub and invasive species management, however, in an email in May 2022 RSPB highlighted that due to a lack of resources work undertaken on the ambitions of the management plan was limited.

The nature reserve SSSI unit is in favourable condition and the scrub encroachment is not considered substantial. RSPB undertake annual habitat management such as scrub clearance with staff and volunteers. Greengage proposes to enhance some of the dense scrub parcels through the creation of glades and rides to increase age and structural diversity and increase the value for invertebrates which is additional to the current management plan as these parcels are very dense.

The removal of sea buckthorn is prioritised over the removal of other non-native invasive species (albeit the removal of other invasive species is still an objective). It is known that removal of sea buckthorn has

taken place but on a site visit in 2022 it was highlighted by the RPSB warden that this was not successful for every stand. RSPB stated in their response²³ to an earlier planning application for the site that if and when specialist contractors are engaged it would be beneficial for them to target removal of the invasive species in question from as much of the local area as is feasible (subject to landowner permissions and appropriate consents etc.). As such, the proposals should remove invasive species within the development footprint and much of the surrounding area.

Additionally, reducing the percentage of scrub on the grassland to below 5% (but keep the scrub buffer along the lagoon edge to limit access to the lagoon) would be additional to the current management proposed as the current percentage is over 5% as it is currently over approximately 30%+ coverage.

Furthermore, the RSPB Hodbarrow Management Plan describes a 5-year plan to develop management and funding opportunities. The Environment Act, 2021 secures habitat management for the next 30 years at least and therefore this development will ensure the long-term conservation and enhancement of the habitats and species at site through a sustained commitment to management; the absence of which could put some sensitive habitats at risk due to successional habitat change. Through implementation of the following interventions, it is likely that the long-term management can ensure that habitats across the site in good condition remain in good condition and that habitats in poorer conditions are improved.

It is likely that the increased management regime for the site will benefit a lot of these areas across site. Therefore, updated BNG calculations should be completed as part of the long-term management of the site to accurately reflect any positive or negative changes and identify where remedial actions are required.

Removal of Invasive species

Several species listed on Schedule 9 species as per the Wildlife and Countryside Act 1981 (as amended) were identified during the PEA including Montbretia sp., Japanese knotweed (*Reynoutria japonica*), Cotoneaster sp. Including wall Cotoneaster, small-leaved cotoneaster (*Cotoneaster microphyllus*) and variegated yellow archangel (*Lamium galeobdolon*).

Whilst sea buckthorn is not an invasive species as per Schedule 9 of the Wildlife and Countryside Act 1981 (as amended), it is considered to be an invasive species in the northwest of England. This was found on the site despite efforts from RSPB to eradicate.

The invasive species (inclusive of sea buckthorn) within the assessment site will be removed by specialist contractors and disposed of following best practice guidance²⁴. Bio-security principles will be followed throughout the construction to prevent the spread of invasive species and an Ecological Clerk of Works (ECoW) shall be present during works, if required.

The presence of invasive species (inclusive of sea buckthorn) on-site post-works will be monitored over the long-term and their control/removal will be undertaken as necessary as part of ongoing habitat management work.

Ecological Features

As referenced in the EclA report, further qualitative ecological enhancement should also be targeted on-site through of habitat for nesting birds as well as invertebrate habitat features such as pollinator posts or bee bricks and bat boxes, to help protect nationally and locally important species, including those specified in the Cumbria's Biodiversity Action Plan.

6.0 SUMMARY AND CONCLUSIONS

In accordance with the Environment Act 2021, the National Planning Policy Framework and local policy (Appendix D), developments (with a few exemptions) have to deliver at least a 10% net gain in biodiversity, which should be evidenced through a complete BNGA using the SBM.

As agreed with the LPA (email dated 4th April 2025) only the areas of habitats that will be impacted (either through loss, enhancement or creation) have been included in the SBM.

There is irreplaceable habitat (Coastal Sand Dunes) within the nature reserve however as this area is being retained in its entirety and is not included within the assessment site. As such, it has not been included in the SBM.

This BNGA has been completed to identify the pre-development (baseline) biodiversity value of the assessment site and compare against the predicted post-development biodiversity value.

The baseline value for the assessment site has been calculated 52.10 HU and as such 57.31 HU are required to achieve 10% BNG.

The post-development design proposals are predicted to deliver 62.71 HU. This is a net gain of 10.61 HU (equivalent to +20.37% for HU).

The design proposals do meet the BNG Trading Rules for all habitat distinctiveness levels at the assessment site.

N.B. The above values are subject to change following the recommended update site walkover/Condition Assessment during the optimal botanical growing season, April to August.

Overall, the development could secure the long-term conservation and enhancement of the habitats and species at site through a sustained commitment to management. The absence of which could create risks for some of the sensitive habitats due to successional change or continued degradation from human trampling.

The proposed development will include areas that will significantly contribute to the biodiversity value of the wider site, including the creation of Lowland Meadow and the enhancement of Lowland Calcareous Grasslands. Therefore, a Habitat Management and Monitoring Plan (HMMP) for the habitat retention/enhancement, creation and long term management over 30 years (minimum) will be required for submission to the Local Planning Authority (LPA). When these recommendations are adhered to, the proposals stand to be compliant with legislation and current planning policy.

Upon receiving planning permission, the submission of a Biodiversity Gain Plan (BGP) to the LPA will be required.

Alongside the BNGA, qualitative ecological enhancement recommendations have also been provided which contribute to further increasing the ecological value of the scheme. Refer to the EcIA.

APPENDIX A PRE-DEVELOPMENT (BASELINE) HABITAT MAP

Figure A.1 *Pre-development (Baseline) Habitat Map*

IRON LINE

- Red Line Boundary
 - The assessment site
 - Artificial littoral coarse sediment
 - Artificial unvegetated unsealed surface
 - Bracken
 - Bramble scrub
 - Developed land; sealed surface
 - Hawthorn scrub
 - Lowland calcareous grassland
 - Lowland meadows
 - Other neutral grassland
- Reference numbers linked to SBM

Title: Figure A1

Drawn by: LT
Date: 07/04/2025

Reviewed by: AC
Date: 07/04/2025

Project number: 553023
Sources: Google Satellite and OpenStreetMap



APPENDIX B POST-DEVELOPMENT HABITAT MAP

Figure B.1 Post-development Habitat Map

IRON LINE

- Planning application boundary
 - The assessment site
 - Artificial littoral coarse sediment
 - Artificial unvegetated unsealed surface
 - Developed land; sealed surface
 - Lowland calcareous grassland
 - Lowland meadows
 - Mixed scrub
 - Other green roof
- Habitat references linked to SBM

Title: Figure B1

Drawn by: LT
Date: 07/04/2025

Reviewed by: AC
Date: 07/04/2025

Project number: 553023
Sources: Google Satellite and OpenStreetMap



APPENDIX C CONDITION ASSESSMENTS

The highlighted green text below indicates which condition has been achieved for each habitat.

C.1 BASELINE HABITATS

Grassland-Bracken

No assessment is required for this habitat as the condition is fixed within the SBM as N/A.

Grassland -Medium or High Distinctiveness

Table C.1 Grassland -Medium or High Distinctiveness Condition Assessment

Condition Assessment Criteria		Habitat reference (1)*	2	3	4	5 Lowland meadow	6 Other neutral
A	<p>"The parcel represents a good example of its habitat type, with a consistently high proportion of characteristic indicator species present relevant to the specific habitat type (and relative to Footnote 3 suboptimal species which may be listed in the UKHab description).1</p> <p>Note - this criterion is essential for achieving Moderate or Good condition for non-acid grassland types only."</p>	Y	Y	N	Y	Y	Y
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	Y	Y	Y	Y	Y	Y

Condition Assessment Criteria		Habitat reference (1)*	2	3	4	5 Lowland meadow	6 Other neutral
	for insects, birds and small mammals to live and breed.						
C	Cover of bare ground is between 1% and 5%, including localised areas, for example, rabbit warrens ² .	Y	N	Y	N	N	Y
D	Cover of bracken <i>Pteridium aquilinum</i> is less than 20% and cover of scrub (including bramble <i>Rubus fruticosus</i> agg.) is less than 5%.	Y	N	Y	Y	N	N
E	Combined cover of species indicative of suboptimal condition ³ and physical damage (such as excessive poaching, damage from machinery use or storage, damaging levels of access, or any other damaging management activities) accounts for less than 5% of total area. If any invasive non-native plant species ⁴ (as listed on Schedule 9 of WCA ⁵) are present, this criterion is automatically failed.	N	N	Y	N	N	Y
F	"There are 10 or more vascular plant species	Y	Y	Y	Y	Y	Y

Condition Assessment Criteria		Habitat reference (1)*	2	3	4	5 Lowland meadow	6 Other neutral
	per m2 present, including forbs that are characteristic of the habitat type (species referenced in Footnote 3 and 5 cannot contribute towards this count). Note - this criterion is essential for achieving Good condition for non-acid grassland types only."						
Total		5	3	4	3	4	4

*Habitat reference as per the SBM

Table C.2 Grassland -Medium or High Distinctiveness Condition Assessment Score

Score	Condition
Passes 5 or 6 criteria, including essential criterion A and additional criterion F.	Good (3)
Passes 3 - 5 criteria, including essential criterion A.	Moderate (2)
Passes 2 or fewer criteria; OR Passes 3 or 4 criteria excluding criterion A and F.	Poor (1)

Heathland and shrub -Scrub

Table C.3 Scrub Condition Assessment

		7	8	9
A	The parcel represents a good example of its habitat type - the appearance and	Y	Y	Y

		7	8	9
	<p>composition of the vegetation closely matches its UKHab description (where in its natural range).¹</p> <ul style="list-style-type: none"> - At least 80% of scrub is native, - There are at least three native woody species², - No single species comprises more than 75% of the cover (except hazel <i>Corylus avellana</i>, common juniper <i>Juniperus communis</i>, sea buckthorn <i>Hippophae rhamnoides</i> or box <i>Buxus sempervirens</i>, which can be up to 100% cover). 			
B	Seedlings, saplings, young shrubs and mature (or ancient or veteran ³) shrubs are all present.	Y	Y	Y
C	There is an absence of invasive non-native plant species ⁴ (as listed on Schedule 9 of WCA ⁵) and species indicative of suboptimal condition ⁶ make up less than 5% of ground cover.	Y	Y	N

		7	8	9
D	The scrub has a well-developed edge with scattered scrub and tall grassland and or forbs present between the scrub and adjacent habitat.	Y	Y	Y
E	There are clearings, glades or rides present within the scrub, providing sheltered edges.	Y	N	Y
Total		5	4	4

Table C.4 Scrub Condition Assessment Score

Condition Assessment Result (out of 5 criteria)	Condition Assessment Score
Passes 5 criteria	Good (3)
Passes 3 or 4 criteria	Moderate (2)
Passes 2 or fewer criteria	Poor (1)

Intertidal sediment- Littoral course sediment

Table C.5 Intertidal sediment Condition Assessment

Condition Assessment Criteria		Good (3 points)	Moderate (2 points)	Poor (1 point)	Met?
A	Coastal processes	Coastal processes are functioning naturally. No evidence of human physical modifications which are clearly impacting the habitat.	Artificial structures present, for example groynes, that are impeding the natural movement of sediments or water, affecting up to 25% of the habitat.	Artificial structures present for example groynes, that are impeding the natural movement of sediments or water, affecting more than 25% of the habitat.	1

Condition Assessment Criteria		Good (3 points)	Moderate (2 points)	Poor (1 point)	Met?
B	Presence and abundance of invasive non-native species	Not more than one invasive non-native species is 'Occasional' on the SACFOR scale or is occupying more than 1% of the habitat. No high-risk species indicative of suboptimal condition present, see Footnote 1 for details.	No invasive non-native species are present above 'Frequent' on the SACFOR scale or they occupy between 1-10% of the habitat. No high-risk species indicative of suboptimal condition present, see Footnote 1 for details.	One or more invasive non-native species are present at an 'Abundant' level on the SACFOR scale; they occupy more than 10% of the habitat; or a high-risk species indicative of suboptimal condition is present – GB Non-native Species Secretariat should be notified, see Footnote 1 for details.	2
C	Water Quality	No visual evidence of pollution. There are no nuisance algal growths that are likely to be attributable to nutrient enrichment. Consider seasonality of survey timing ² .	Visual evidence of low to moderate levels of pollution. Elevated algal growth with increases in cover that may indicate nutrient enrichment. Consider seasonality of survey timing ² .	Visual evidence of high algal growth that is indicative of nutrient enrichment. Signs of eutrophication that would impede bird feeding. Consider seasonality of survey timing ² .	3
D	Non-natural structures and direct human impacts	No evidence of impacts from direct human activities, or they occupy <1% of the habitat area (for example, pontoons, moorings, boats, crab tiles, bait digging or anchoring scars).	Evidence of impacts from direct human activities occupies 1-10% of the habitat area (for example, pontoons, moorings, boats, crab tiles, bait digging or anchoring scars).	Evidence of impacts from direct human activities occupies >10% of the habitat area (for example, pontoons, moorings, boats, crab tiles, bait digging or anchoring scars).	2

Condition Assessment Criteria		Good (3 points)	Moderate (2 points)	Poor (1 point)	Met?
E	Litter (when examining a beach strandline, mean high water line or intertidal rocky shore)	Following the Marine Conservation Society (MCS) beach litter survey method, the number of items of litter does not exceed 0.0036 m ⁻¹ min ⁻¹ person ⁻¹ , equivalent to up to 20 items per person per 100 m per hour. See Footnote 3 for details.	Following the MCS beach litter survey method, the number of items of litter does not exceed 0.0078 m ⁻¹ min ⁻¹ person ⁻¹ , equivalent to between 21 and 47 items of litter per person per 100 m per hour. See Footnote 3 for details.	Following the MCS beach litter survey method, the number of items of litter exceeds 0.0078 m ⁻¹ min ⁻¹ person ⁻¹ , equivalent to more than 47 items of litter per person per 100 m per hour. See Footnote 3 for details.	3
Total					11

Table C.6 Intertidal sediment Condition Assessment Score

Score	Condition
12-15 (75-100%)	Good
8-11 (50-75%)	Moderate
5-7 (0-50%)	Poor

Urban - Artificial unvegetated, unsealed surface

No assessment is required for this habitat as the condition is fixed within the SBM as N/A.

Urban - Developed Land; Sealed Surface

No assessment is required for this habitat as the condition is fixed within the SBM as N/A.

C.2 POST-DEVELOPMENT HABIATS

Grassland -Medium or High Distinctiveness

Table C.7 Grassland Medium or High Distinctiveness Condition Assessment

Condition Assessment		Created Lowland meadow	Enhanced Calcareous Grassland (2 and 4)
A	<p>"The parcel represents a good example of its habitat type, with a consistently high proportion of characteristic indicator species present relevant to the specific habitat type (and relative to Footnote 3 suboptimal species which may be listed in the UKHab description).¹</p> <p>Note - this criterion is essential for achieving Moderate or Good condition for non-acid grassland types only."</p>	N	Y
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 insects, birds and small mammals to live and breed.	Y	Y
C	Cover of bare ground is between 1% and 5%, including localised areas, for example, rabbit warrens ² .	N	Y
D	Cover of bracken <i>Pteridium aquilinum</i> is less than 20% and cover of scrub (including bramble <i>Rubus fruticosus</i> agg.) is less than 5%.	Y	Y
E	<p>Combined cover of species indicative of suboptimal condition³ and physical damage (such as excessive poaching, damage from machinery use or storage, damaging levels of access, or any other damaging management activities) accounts for less than 5% of total area.</p> <p>If any invasive non-native plant species⁴ (as listed on Schedule 9 of WCA5) are present, this criterion is automatically failed.</p>	Y	Y
F	<p>"There are 10 or more vascular plant species per m² present, including forbs that are characteristic of the habitat type (species referenced in Footnote 3 and 5 cannot contribute towards this count).</p> <p>Note - this criterion is essential for achieving Good condition for non-acid grassland types only."</p>	Y	Y
Total		4	6

*Habitat reference as per the SBM

Table C.8 Grassland Medium of High Distinctiveness Condition Assessment Score

Passes 5 or 6 criteria, including essential criterion A and additional criterion F.	Good (3)
Passes 3 - 5 criteria, including essential criterion A.	Moderate (2)
Passes 2 or fewer criteria; OR Passes 3 or 4 criteria excluding criterion A and F.	Poor (1)

Scrub Condition Assessment Score

Table C.9 Scrub Condition Assessment

		8	9
A	<p>The parcel represents a good example of its habitat type - the appearance and composition of the vegetation closely matches its UKHab description (where in its natural range).¹</p> <ul style="list-style-type: none"> - At least 80% of scrub is native, - There are at least three native woody species², - No single species comprises more than 75% of the cover (except hazel <i>Corylus avellana</i>, common juniper <i>Juniperus communis</i>, sea buckthorn <i>Hippophae rhamnoides</i> or box 	Y	Y

		8	9
	Buxus sempervirens, which can be up to 100% cover).		
B	Seedlings, saplings, young shrubs and mature (or ancient or veteran ³) shrubs are all present.	Y	Y
C	There is an absence of invasive non-native plant species ⁴ (as listed on Schedule 9 of WCA ⁵) and species indicative of suboptimal condition ⁶ make up less than 5% of ground cover.	Y	Y
D	The scrub has a well-developed edge with scattered scrub and tall grassland and or forbs present between the scrub and adjacent habitat.	Y	Y
E	There are clearings, glades or rides present within the scrub, providing sheltered edges.	Y	Y
Total		5	5

Table C.10 Scrub Condition Assessment score

Condition Assessment Result (out of 5 criteria)	Condition Assessment Score
Passes 5 criteria	Good (3)
Passes 3 or 4 criteria	Moderate (2)
Passes 2 or fewer criteria	Poor (1)

Urban - Artificial Artificial unvegetated, unsealed surface

No assessment is required for this habitat as the condition is fixed within the SBM as N/A.

Urban - Developed Land; Sealed Surface

No assessment is required for this habitat as the condition is fixed within the SBM as N/A.

Urban - Other Green Roof

No assessment is required for this habitat as the condition is fixed within the SBM as N/A.

APPENDIX D RELEVANT LEGISLATION AND POLICY

D.1 LEGISLATION

The BNGA has been compiled with reference to the following relevant nature conservation legislation, planning policy and the UK Biodiversity Framework from which the protection of sites, habitats and species is derived in England including:

- UK Government's 25 Year Environment Plan (Defra, 2018);
- Biodiversity 2020: A Strategy for England's Wildlife and Ecosystem Services (DEFRA, 2011);
- National Planning Policy Framework (NPPF) (MHCLG, 2024)²⁵;
- The Natural Environment and Rural Communities (NERC) Act (HMSO, 2006);
- The Environment Act (Defra, 2021); and
- Copeland Local Plan 2021-2039 (Copeland Borough Council 2024)²⁰;

The Environment Act, 2021

Under the Environment Act, 2021, as of 12th February 2024 and 2nd April 2024, it is mandatory in England for new developments (with a small number of exceptions) to deliver a minimum 10% biodiversity net gain (BNG), as measured by the Statutory Biodiversity Metric or Small Sites Metric (SSM) respectively, secured through planning condition as standard (as per schedule 14 of the Act). Approach to the delivery of BNG must follow the mitigation hierarchy, with avoidance of impact and on-site compensation/gains prioritised, ahead of the use of off-site compensation, or the purchase of statutory credits.

The Act introduces the condition that no development may begin unless a Biodiversity Gain Plan (BGP) has been submitted and approved by the LPA.

The Act also amends requirements of the NERC Act, 2006, adding the need to not just conserve, but enhance biodiversity through planning projects. Furthermore, it introduces the need for the LPA to have regard to relevant local nature recovery strategies and relevant species/protected site conservation strategies, when making their decision.

Under the Act, the enhancements must be maintained for at least 30 years.

D.2 PLANNING POLICY

National

National Planning Policy Framework

The National Planning Policy Framework (NPPF) 2024²⁵ sets out the Government's planning policies for England, including how plans and decisions are expected to apply a presumption in favour of sustainable development. Chapter 15 of the NPPF focuses on conservation and enhancement of the

natural environment, stating plans should ‘identify and pursue opportunities for securing measurable net gains for biodiversity’.

It goes on to state: ‘if significant harm to biodiversity 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’. Alongside this, it acknowledges that planning should be refused where irreplaceable habitats such as ancient woodland are lost.

Regional

Copeland Local Plan²⁰

Policy DS7: Sustainable Drainage

New development must incorporate Sustainable Drainage Systems unless it can be demonstrated that this is not appropriate. Drainage systems should be well designed with consideration given to the additional benefits they can provide as spaces for landscape, biodiversity and recreation.

Development on greenfield sites should seek to achieve pre-development or better levels of surface water run-off and on previously developed sites, a reduction in surface water discharge should be sought. In demonstrating a reduction clear evidence of existing connections from the site and associated rates of discharge calculations should be provided. In both cases, measures should be put in place to prevent pollution entering watercourses with surface water managed at source. Where identified on the local validation list applicants should submit a Drainage Strategy that shows how foul and surface water will be effectively managed and maintained. Where SuDS are being incorporated details of their long-term management should be provided. This will be secured through the use of s106 agreements. Surface water should be discharged in the following order of priority:

1. To a suitable soakaway or some other form of infiltration system
2. An attenuated discharge to a surface water body such as a watercourse giving full consideration to the catchment and sub-catchments
3. An attenuated discharge to a public surface water sewer, highway drain or another discharge system where there is clear evidence, to the satisfaction of the Council, that alternative preferred options are not available
4. An attenuated discharge to a public combined sewer where there is clear evidence, to the satisfaction of the Council, that alternative preferred options are not available

Strategic Policy T1: Tourism Development

The Local Plan will support the creation, enhancement and expansion of tourist attractions, new build visitor accommodation and infrastructure in locations consistent with the settlement hierarchy. All tourism development must be of an appropriate scale, located where the environment and infrastructure can accommodate the visitor impact, and where it does not result in unacceptable harm to environmental assets (including landscapes, heritage assets and biodiversity) or the character of the area. Proposals for tourism development outside of defined settlements will be supported where:

- The proposal is for a specific activity or function that requires such a location; or
- The proposal enhances Copeland's existing place bound assets; or
- The proposal is for the change of use, or diversification of an existing building, to provide overnight or longer stay visitor accommodation; or
- The proposal is for a farm diversification scheme in a rural area that will provide or enhance tourist provision.

Policy T2: Tourism Development along the Developed Coast

Opportunities for tourist development in close proximity to the coastline (with the exception of areas designated as undeveloped coast) of an appropriate type and scale will be supported in principle where the proposal:

- a) Provides improved accessibility to the coastal walkways and cycle routes; or
- b) Improves the quality and range of holiday accommodation including overnight tourist provision; or
- c) Creates or enhances gateways and/or hubs; or
- d) Enhances the offer for both onshore and offshore visitors at Whitehaven Harbour including provision for the docking of cruise ships; or
- e) Provides opportunities to enhance the tourism offer in South Copeland.

In all circumstances development should be of an appropriate scale located where the environment and infrastructure can accommodate the visitor impact, and where it does not result in unacceptable harm to environmental assets including landscapes, heritage assets, and biodiversity. All development should ensure local landscape character is maintained and avoid detrimental impacts on setting of Heritage Coast.

Strategic Policy N1: Conserving and Enhancing Biodiversity and Geodiversity

The Council is committed to conserving Copeland's biodiversity and geodiversity including protected species and habitats.

Potential harmful impacts of any development upon biodiversity and geodiversity must be identified and considered at the earliest stage

Proposals must demonstrate, to the satisfaction of the Council, that the following mitigation hierarchy must have been undertaken:

Avoidance – Biodiversity and geodiversity must be considered when drafting up proposals and any potential harmful effects on biodiversity and geodiversity must be identified along with appropriate measures that will be taken to avoid these effects.

Mitigation – Where harmful effects cannot be avoided, they must be appropriately mitigated in order to overcome or reduce negative impacts.

Compensation – Where mitigation is not possible or viable or in cases where residual harm would remain following mitigation, harmful effects should be compensated for. Where this is in the form of

compensatory habitat an area of equivalent or greater biodiversity value should be provided. Compensation is a last resort and will only be accepted in exceptional circumstances.

Where harm remains to a National Site Network, Ramsar site, or functionally linked land, or Site of Special Scientific Interest, development will only be approved where it can be demonstrated that there are imperative reasons of overriding public interest. In such cases, compensatory measures must ensure the overall coherence of the network of European or National Sites as a whole is protected.

Planning permission will be refused for any development if significant harm cannot be avoided, mitigated or compensated for.

A Construction Environmental Management Plan should be submitted where appropriate and sustainable construction methods must be used where possible.

Development proposals where the principal objective is to conserve or enhance biodiversity and geodiversity interests will be supported in principle.

Strategic Policy N2: Local Nature Recovery Networks

The Council will support the identification, implementation, protection and enhancement of Local Nature Recovery Networks that provide important linkages for wildlife within Copeland and beyond. Development which protects or enhances Local Nature Recovery Networks will be supported in principle.

Strategic Policy N3: Biodiversity Net Gain

All development, with the exception of that listed in the Environment Act 2021 and any documents which may supersede it must provide at least 10% biodiversity net gain over and above existing site levels, following the application of the mitigation hierarchy set out in Policy N1 above. This is in addition to any compensatory habitat provided under Policy N1.

Net gain should be delivered on-site where possible. Where on-site provision cannot be achieved in full, the remaining provision must be made elsewhere. This should be provided in order of the following preference:

1. Off-site in an area identified as a Local Nature Recovery Network in the Plan area;
2. Off-site on an alternative suitable site within Cumberland ;
3. Off-site on an alternative suitable site;
4. Through the purchase of off-site biodiversity units on the market;
5. Through the purchase of an appropriate amount of national biodiversity credits.

Sites where net gain is provided (on or off-site) must be managed and monitored by the landowner for a minimum period of 30 years. Where appropriate applicants should supply a Habitat Creation Plan and a Habitat Management and Monitoring Plan (HMMP). Monitoring reports detailing the site's condition post-enhancement must be submitted to the Council each year over this period.

Where there is evidence of deliberate neglect or damage to any of the habitats on development sites in order to reduce its biodiversity value the biodiversity predevelopment value of the on-site habitat will be

calculated as the biodiversity value of the habitat on the date immediately before the degradation took place.

Strategic Policy N8: The Undeveloped Coast

The Council will ensure that the landscape character of the undeveloped coast is maintained by conserving the intrinsic qualities, natural beauty and open character of the undeveloped coast from inappropriate development. Inappropriate development includes that which affects views within or towards/from the St Bees and Whitehaven Heritage Coast. The following types of development will however be supported:

- Development which supports the management of the undeveloped coast for biodiversity;
- Development which provides or improves safe access to and interpretation of the undeveloped coast for residents and visitors such as appropriate fencing, signage and interpretation boards;
- Energy generating developments that that require a coastal location along the undeveloped coast, provided that the potential impacts on biodiversity, landscape and heritage assets are carefully assessed against the benefits. Where negative impacts are likely these must be mitigated against and compensated for.

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