Teesworks
Environment and Biodiversity Strategy

South Tees Development Corporation (Teesworks)

September 2021

LICHFIELDS

LICHFIELDS

Lichfields is the pre-eminent planning and development consultancy in the UK

We've been helping create great places for over 50 years.

lichfields.uk

61586/01/AG/HE
20117365v1

Contents

1.0 Introduction

1.1 There is an increasing focus on habitat protection and biodiversity enhancement in the UK. Much is being done at the national level to put in place more specific obligations on developments to ensure they compensate for their impacts on biodiversity.

1.2 This Environment & Biodiversity Strategy has been prepared on behalf of the South Tees Development Corporation (STDC) (referred to as "Teesworks"). It responds to planning policy and emerging legislation in respect of biodiversity protection and enhancement by:

- identifying and mapping the existing / baseline biodiversity value of the Teesworks area; and
- identifying potentially feasible and viable opportunities for enhancement schemes to be created that could ensure habitat impacts arising from development at Teesworks are mitigated and / or compensated for.

1.3 The Strategy represents an exciting yet challenging opportunity for Teesworks to deliver biodiversity enhancements. Teesworks has invested significantly in the preparation of this Strategy; one that is being brought forward to put in place measures for biodiversity gains ahead of mandatory national requirements. There are currently few examples in the UK of strategies of this scale and nature and, as a result, there is no widely established methodologies for such. Instead, the methodology for this Strategy has been devised by leading practitioners in ecology, town planning, chartered surveying and land management, namely:

- Lichfields (Town Planning)
- Arup (Ecology)
- Industry Nature Conservation Association (INCA) (Ecology)
- GSC Grays (Chartered Surveyors)

Purpose

1.4 The primary purpose of Teesworks is to deliver transformative industrial regeneration across the Teesworks site. In doing so, Teesworks is committed to also achieving wider environmental benefits including protection of habitats and addressing any significant impacts of development on biodiversity.

1.5 This Strategy is being submitted to Redcar & Cleveland Borough Council (RCBC) to demonstrate Teesworks' commitment to delivering habitat and biodiversity enhancements. It sets out the mechanisms for how these enhancements can be achieved and how their delivery can be monitored.

1.6 The Strategy will evolve over time. As well as achieving enhancements within Teesworks' landholdings, the Strategy relies upon the availability of land outside of Teesworks for its delivery and these off-site opportunities will change over time. It is set up to respond to these changes. It is anticipated, therefore, that the Strategy will be updated annually and submitted to RCBC as part of a regular monitoring and reporting commitment.

1.7 The Strategy will enable Teesworks to fulfil its obligations that are tied to developments within Teesworks through the imposition of conditions on planning permissions, relating to habitat mitigation and compensation. It will also, therefore, be submitted periodically to RCBC in order to discharge those planning conditions. Furthermore, it is expected that future planning permissions granted for development at Teesworks will place requirements, through planning conditions, to comply with this strategy.

Structure

1.8 This Strategy is structured as follows:

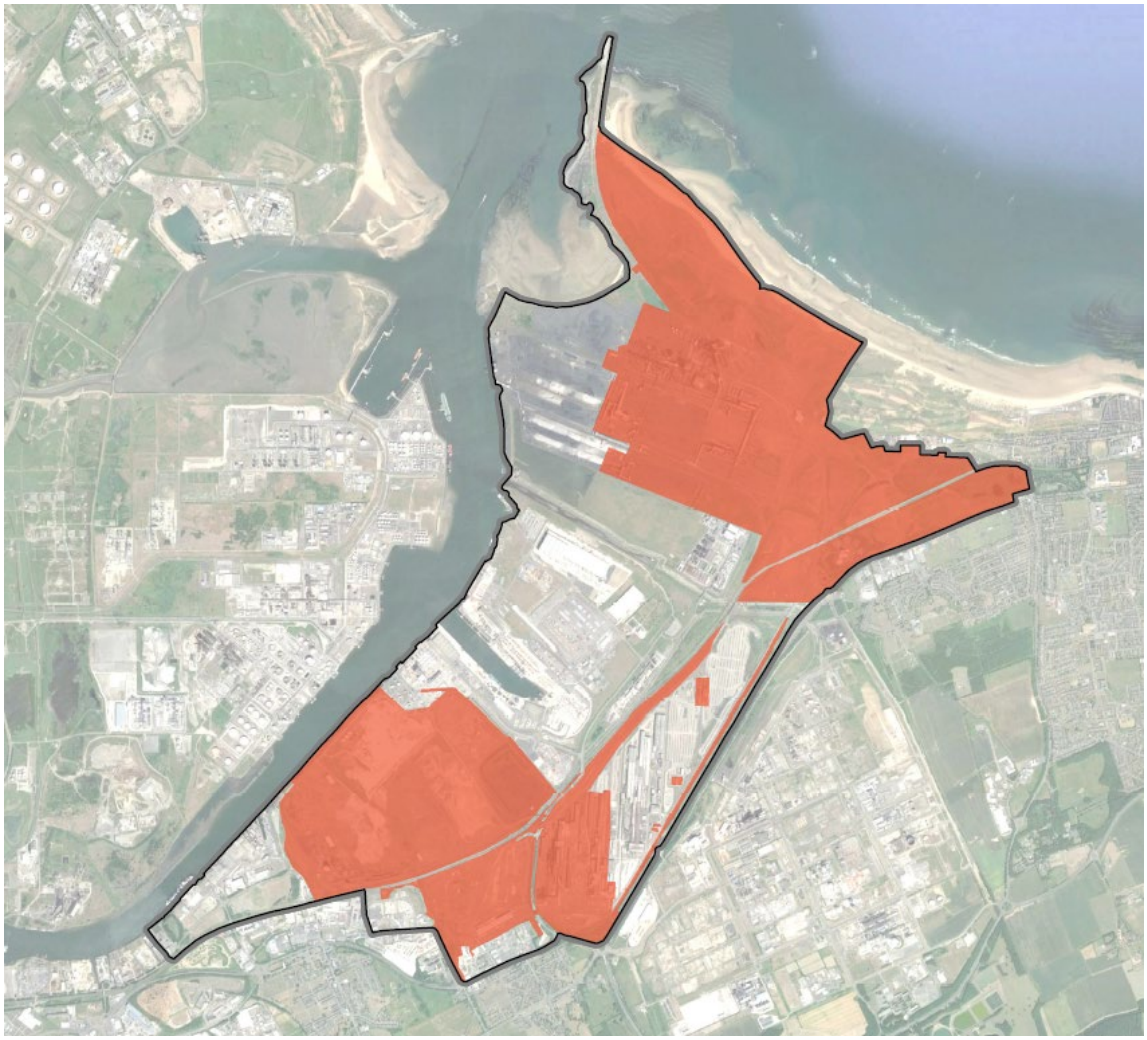
- Introduction;
- Context;
- Overarching Objectives
- Baseline Assessment and Engagement;
- Feasibility and Deliverability;
- Reporting and Monitoring; and
- Next Steps.

2.0 Context

The Site

2.1 The Teesworks site to which this Strategy relates is approximately 1,800 hectares and is shown outlined in black in Figure 2.1 below. References in this document to "on-site" are to the area shaded in red, which are within Teesworks' control.

Figure 2.1 The Teesworks Site



Background to Teesworks

2.2 South Tees Development Corporation (operating under the name 'Teesworks') is the third Mayoral Development Corporation to be established and the first outside of London. It was created in August 2017 by the then Secretary of State for Communities and Local Government pursuant to Section 198 of the Localism Act 2011 at the request of the Tees Valley Combined Authority ('TVCA') and was established by The South Tees Development Corporation (Establishment) Order 2017.

2.3 STDC prepared the South Tees Regeneration Master Plan to support the creation of new local planning policy for the area – to ensure alignment between policy and its regeneration mandate.

This Master Plan was originally published in 2017 and was revised to reflect ongoing changes in market demand in November 2019.

2.4 The Master Plan sets out the vision for transforming the STDC / Teesworks area into a world-class, modern, large-scale industrial business park. It provides a flexible development framework where land plots can be established in a variety of sizes to meet different occupier needs in the most efficient manner possible.

2.5 When the Development Corporation acquired the remaining former steelworks land in 2020, the Inspector who reviewed the Master Plan, and when confirming the Compulsory Purchase Order, commented:

"The regeneration of the Order Lands will contribute to sustainable development and accord with the national objective of building a strong, responsive and competitive economy. It would also create an environment which has the potential to support the wellbeing of the community. The decontamination and reuse of the land would contribute to the protection and enhancement of the natural and built environment. The scheme which underpins the CPO is in line with national planning policy".[1]

2.6 The Master Plan is to be supported by area-wide strategies that will seek to address environmental considerations and will help facilitate the efficient delivery of development sites. This Environment & Biodiversity Strategy is one of these strategies.

Background to the Environment & Biodiversity Strategy

Policy and Legislation

2.7 At the current time, the biodiversity requirements on development schemes are twofold:

1 To avoid significant harm, including through the loss of biodiversity (a "net loss"); and

2 To achieve "net gains" in biodiversity value.

2.8 In respect of point 2, there is currently no mandatory requirement through legislation to achieve net gains in development schemes. As explained below, the Environment Bill is planning to introduce this net gain requirement. This Strategy is prepared in anticipation of this requirement, in accordance with its principles, and is able to meet the net gain objectives set out therein.

2.9 The National Planning Policy Framework 2021 (NPPF) includes a number of provisions aimed at protecting and enhancing biodiversity. These derive from one of the overarching objectives of the planning system which is to protect and enhance our natural, built and historic environment, in part by improving biodiversity.

2.10 Specifically the NPPF requires that planning policies and decisions should minimise impacts on and provide net gains for biodiversity (paragraph 174), and advises that *'if significant harm to biodiversity resulting from a development cannot be avoided…, adequately mitigated, or as a last resort, compensated for, then planning permission should be refused'* (paragraph 180).

2.11 In terms of national legislation, the Natural Environment and Rural Communities Act 2006 places a duty on local authorities to "*have regard*" to the purpose of conserving biodiversity. However, this is a non-binding duty and emerging legislation, in the form of the Environment Bill, is seeking to strengthen the legal requirements in relation to conserving and enhancing biodiversity.

[1] Compulsory Purchase Order Decision (Case Ref: APP/PCU/CPOP/V0728/3226769), paragraph 121

2.12 In 2018 the Government published *"A Green Future: Our 25 Year Plan to Improve the Environment"* (subsequently updated in 2019), which has an overarching aim to leave the environment in a better state than it inherited it for the next generation. To this end, the plan includes a number of 25-year goals and a set of actions that will be taken to achieve these. The first of these is *'embedding an 'environmental net gain' principle for development'*.

2.13 Government's 25 year plan paved the way for the Environment Bill, which, following consultation, was first published in draft in December 2018 and is now progressing through the House of Lords; may receive Royal Assent later this year (2021). The Environment Bill intends to introduce a new framework for environmental governance in England and Northern Ireland (although separate frameworks are proposed) as the UK leaves the legislative structure and policies of the EU.

2.14 The Environment Bill includes a new requirement that developers will need to provide a minimum of 10% biodiversity net gain (BNG) as a condition of planning permission for new development. The mechanism for doing so will be a mandatory condition on all planning permissions (apart from specific exclusions) requiring the Local Planning Authority (LPA) to approve a biodiversity gain plan. The plan will need to demonstrate that the biodiversity value attributable to the development exceeds the pre-development biodiversity value by at least 10%. The biodiversity value attributable to a development is made up of:

- The post-development biodiversity value of the onsite habitat;
- The biodiversity value or any registered biodiversity gain allocated to the development; and
- The biodiversity value of any biodiversity credits purchased from the government for the development.

2.15 Biodiversity will be measured by way of the DEFRA Metric (see below), which uses habitat as a proxy for biodiversity.

2.16 Provisions in the Environment Bill include a two year transition period from the Bill receiving Royal Assent, to the application of the mandatory planning condition. Therefore, the requirement to provide a 10% gain in biodiversity value will not become mandatory before autumn 2023.

The Defra Metric

2.17 The biodiversity metric published by Defra and Natural England is a habitat-based approach to assessing an area's value to wildlife. It uses habitat features to calculate a biodiversity value, which is expressed in Biodiversity Units (BDUs). At the current time is not a mandatory requirement to apply the Defra Metric when calculating biodiversity values.

2.18 For non-linear habitats the metric attributes biodiversity value by multiplying five variables:

1 the area of the habitat;

2 the distinctiveness of the habitat type;

3 the condition of the habitat;

4 the extent to which it is connected to other habitats of the same type; and

5 the strategic significance of that habitat in that specific area.

2.19 When calculating the value of compensatory habitat (i.e. habitat creation or enhancement) two further multipliers are applied to account for time to target condition and difficulty of creation. These typically reduce the number of BDUs which might be achieved, meaning that a greater area of habitat needs to be created or enhanced than has been lost. A further multiplier is

applied if the compensatory habitat is outside of both the LPA area and the Natural Character Area where the development occurs. This further reduces the number of BDUs which can be achieved.

2.20 The metric specifies that compensation for habitat losses must be of at least the same level of distinctiveness as those lost. This has implications for this strategy as the existing biodiversity baseline includes a number of higher distinctiveness habitat types, which will need to be compensated for on a like for like basis.

2.21 For watercourses, which are linear, a separate Rivers Metric is used, requiring a specific Rivers Condition Assessment which inputs to a quantified assessment of the ecological value of watercourses. This multiplies the length of the watercourse in kilometres with values for the Distinctiveness, Condition and Strategic Significance of the watercourse with the resulting value expressed as River Units.

2.22 In July 2019 the Metric 2.0 was published by Defra as a test version; developers and local authorities were encouraged to use it to evaluate the biodiversity value associated with their schemes and applications, and as such it was widely used as standard in much of the country. In July 2021 the Metric 2.0 was replaced by the Metric 3.0; the key differences include that the Metric 3.0 does not include a connectivity element in its valuation, and in valuing compensatory habitats it rewards creation of habitat in advance and penalises deferred habitat creation. The baseline assessment used to underpin this strategy has been measured using the Metric 2.0, however, it is proposed to update this on an incremental basis using the Metric 3.0 and for this reason, compensatory measures have also been assessed using the Metric 2.0.

2.23 The baseline biodiversity values cited in this Strategy have been calculated using the Metric 2.0; however, when planning applications requiring a biodiversity assessment are submitted in future, the baseline will be calculated using the most up to date version of the Metric in use at that time. Therefore, the baseline values in this report may change as further assessments are undertaken.

Local Policy and Objectives

2.24 The Redcar & Cleveland Local Plan (adopted May 2018) supports industrial-led regeneration of the Teesworks area. The Local Plan recognises and aims to address the relatively recent steep decline of the area's traditional employment base of manufacturing based on steel, chemicals and heavy engineering. Accordingly, sustainable economic growth and regeneration are at the heart of the Local Plan, which includes policies LS4 (South Tees Spatial Strategy) that supports the regeneration of the Teesworks area, and ED6 (Promoting Economic Growth) which allocates the Teesworks area for employment uses.

2.25 Policy N4 (Biodiversity and Geological Conservation) of the Local Plan aims to protect and enhance the borough's biodiversity and geological resources and prioritises the protection of internationally and nationally important sites such as the SPAs and SSSIs respectively. (The protection of designated SPAs on-site within the Teesworks area (i.e. at South Gare/ Coatham Sands) does not feature as part of this Strategy as any associated biodiversity enhancement arising is not assignable to any compensation / off-setting strategy).

2.26 Policy N4 states that *"Biodiversity… should be considered at an early stage in the development process, with appropriate protection and enhancement measures incorporated into the design of development proposals, recognising wider ecosystem services and* ***providing net gains wherever possible****."*

2.27 The South Tees Area Supplementary Planning Document (adopted May 2018) (SPD) is to be read alongside the policies in the Redcar & Cleveland Local Plan and is informed by the South

Tees Regeneration Master Plan. It supports the economic and physical regeneration of the Teesworks area, setting out the vision and core objectives for the area and providing greater detail on how planning policies will be applied.

2.28 The SPD includes a number of Strategic Development Principles which will be used to guide the determination of planning applications associated with the redevelopment of the Teesworks area. Development Principle STDC7: *Natural Environmental Protection and Enhancement* aims to protect and, and "*where appropriate*" and "*where possible*", enhance designated and non-designated sites of biodiversity and geodiversity value and interest within the South Tees / Teesworks area.

2.29 Development Principle STDC 7 of the SPD explains that net environmental gains should be provided where appropriate and viable.

2.30 Both the Local Plan and SPD were reviewed by the Inspector who confirmed the Development Corporation's Compulsory Purchase Order in 2020 and who commented:

"In a planning context, it is noted that both the Local Plan and the SPD were subject to Strategic Environmental Assessments (forming part of a Sustainability Appraisal in relation to the Local Plan) as well as a Habitats Regulations Assessment. The overall conclusion was that the SPD would be likely to have significant beneficial effects on the environment and that no significant adverse effects are likely. There is no reason to suppose that these matters, including effects on the SPA and the SSSI will be impediments to the scheme underpinning the CPO."[2]

Planning Permissions at Teesworks

2.31 A number of planning permissions have been granted in the Teesworks area in advance of the publication of this Strategy, which put in place (by way of planning condition) requirements to confirm the feasibility of providing habitat mitigation and compensatory habitat for resulting biodiversity losses. Whilst the conditions are specific to each permission, in general they require:

- the submission of an Environment & Biodiversity Strategy, confirming the feasibility of providing compensatory habitat equivalent to the biodiversity forecast to be lost through implementation of the development;
- the Environment & Biodiversity Strategy should include the mechanism for provision and ongoing management;
- where off-site compensation is proposed, demonstration that on-site provision is not feasible;
- details of any mitigation and compensation proposed including long term maintenance regimes; and
- implementation of the identified mitigation and compensation within a specified period in relation the development.

2.32 This Strategy (and subsequent iterations) will be submitted to RCBC to discharge the conditions on the permissions listed in table 2.1 below, and similar conditions attached to future permissions in the Teesworks area. In respect of undetermined applications at the time of preparing this Strategy, there are five outline planning applications for industrial development across much of the Teesworks area (planning application references: R/2020/0819/ESM;

[2] Compulsory Purchase Order Decision (Case Ref: APP/PCU/CPOP/V0728/3226769), paragraph 54

R/2020/0820/ESM; R/2020/0821/ESM; R/2020/0822/ESM; and R/2020/0823/ESM) as well as an application for a Development Consent Order for the "Net Zero Teesside" carbon capture utilisation and storage project within the Teesworks area.

Table 2.1 Planning permissions granted within Teesworks requiring the submission of an Environment and Biodiversity Strategy

Planning permission reference	Site Address	Description of Development	Date permission granted	Date Environment and Biodiversity Strategy required to be submitted
R/2019/0767/OOM	Grangetown Prairie, Land east of John Boyle Road and west of Tees Dock Road, Grangetown	Outline application for the construction of an Energy Recovery Facility (ERF) and associated development	24/07/2020	Prior to commencement of development (except for site preparation works)
R/2020/0318/FFM	Land at Prairie Site, Grangetown	Engineering operations associated with ground remediation and preparation including removal of former railway embankment and works to Holme Beck and Knitting Wife Beck	30/09/2020	30/09/2021
R/2020/0357/OOM	Land at South Tees Development Corporation east of Smiths Dock Road and west of Tees Dock Road	Outline planning application for demolition of existing structures on site and the development of up to 418,000 sqm (gross) of general industry (use class B2) and storage or distribution facilities (use class B8) with office accommodation (use class B1), HGV and car parking and associated infrastructure works all matters reserved other than access	03/12/2020	03/12/2021
R/2020/0684/ESM	Land at South Bank Wharf, Grangetown, Lackenby	Demolition of existing redundant quay structures, capital dredging and development of new quay and associated works (phase 1)	19/03/2021	19/03/2022
R/2020/0685/ESM	Land at South Bank Wharf, Grangetown, Lackenby	Demolition of existing redundant quay structures, capital dredging and development of new quay and associated works (phase 2)	19/03/2021	19/03/2022

2.33 By way of examples, the condition imposed on permission ref. R/2020/0318/FFM is provided below:

"Within 12 months of the grant of this planning permission, an Environment and Biodiversity Strategy shall be prepared and submitted to the local planning authority that confirms the feasibility of providing habitat mitigation and compensatory habitat equivalent to be 173.58 Biodiversity Units (including habitats identified as of High Distinctiveness in Table 4 of the Arup Ecological Impact Assessment, 24 June 2020) within the site and / or off-site, and the mechanisms for its provision and on-going management. That Strategy shall be approved by the local planning authority. Thereafter, and where compensatory provision is demonstrated within the Strategy to be feasible and deliverable, it shall be carried out in accordance with the Strategy prior to each phase of development commencing following the approval of reserved matters.

REASON: In the interest of the ecological value and long-term maintenance of the site in accordance with policies SD4 and N4 of the Redcar and Cleveland Local Plan."

2.34 Condition no.8 attached to the planning permission ref. R/2020/0357/OOM reads as follows:

"Within 12 months of the grant of this permission, an Environment and Biodiversity Strategy shall be prepared and submitted to the local planning authority that confirms the feasibility of providing habitat mitigation and compensatory habitat equivalent to be 363.55 area based biodiversity units and 20 river units (including habitats identified as of High Distinctiveness in Table 4.7 of the Supplementary Environmental Statement (September 2020) within the site and / or off-site, and the mechanisms for its provision and on-going management. The Strategy shall be approved by the local planning authority. The Environment and Biodiversity Strategy shall include a timetable for its periodic review and shall be updated in accordance with that approved timetable to include the following for any agreed phase of development:

• The details of any new and enhanced biodiversity to be created on site;

• The details of viable compensation habitat where on-site mitigation is demonstrated not to be feasible;

• The details of treatment of site boundaries and/or buffers around water bodies;

• The details of long-term maintenance regimes and management responsibilities.

The identified mitigation and, where demonstrated to be necessary and feasible, compensation shall be provided in accordance with the Strategy and any subsequent agreed amendments to it, and shall be implemented within 12 months of occupation.

REASON: to establish a framework for biodiversity.

2.35 The above conditions are attached to planning permissions for the preparation of land (i.e. to carry out remediation and site levelling works) and for outline permission to establish the principle of industrial development on the South Bank site. As such, these permissions do not grant permission for the final layout of development (i.e. industrial buildings and associated services roads and areas). It is not, therefore, possible, at that stage, to determine the type and level of habitat mitigation that can be provided within any landscape areas to be created within the final development plots. The Strategy recognises that an objective of habitat mitigation / compensation is to provide in the first instance and as a priority, mitigation within the development plots of the final development schemes where feasible, before looking at opportunities to provide compensation, by way of habitat enhancement schemes, away from the development plots and off-site.

2.36 The Strategy takes a cautious and robust approach in this regard. It is explained in the later sections that when identifying the potential overall biodiversity loss arising from development across Teesworks, that total loss (and indeed a net gain) can be compensated for through a combination of delivering enhancement schemes both within the wider Teesworks area or off-site. This level of compensation will be reduced when opportunities are taken to design in and deliver habitat mitigation and biodiversity enhancements within the development plots. The extent to which this level will be reduced will be understood at the 'reserved matters' stage for developments brought forward pursuant to outline planning permissions or when detailed planning applications for end-use industrial developments are submitted.

2.37 One example of this is the Net Zero Teesside project where it is concluded that there are opportunities within the development plot of the project to create biodiversity enhancements greater than what is lost as a result of the development[3].

[3] The Indicative Landscape and Biodiversity Strategy for the Net Zero Teesside Project (May 2021, AECOM) at Appendix 4 identifies a baseline biodiversity value (on-site) of 105.47 BDUs and a post development biodiversity value of 115.96 BDUs which represents delivery of 10.49 additional BDUs, which equates to a 9.95% net gain in Biodiversity.

3.0 Overarching objectives

3.1 The overarching objectives of this Strategy are set out below.

1 To address the requirements of:

   a current national and local planning policy; which are to avoid significant harm through loss of biodiversity value and to provide net gains where possible; and

   b the relevant conditions on existing (and future) planning permissions granted in the Teesworks area; which are broadly to identify how the loss in biodiversity value arising from individual developments can be mitigated or compensated for.

2 To deliver the compensatory habitat in accordance with the principles of the Defra Metric so that existing habitat which is classified as 'high-distinctiveness' by the metric is compensated for on a like for like basis.

3 To demonstrate the feasibility of delivering on and off-site compensatory habitat equivalent to the value of onsite biodiversity that will be lost through the regeneration of Teesworks. This will first entail demonstrating the feasibility of enhancing existing and creating new habitats on the undevelopable parts of Teesworks to maximise the provision of compensatory biodiversity value on site. The feasibility of delivering compensatory biodiversity habitats across a range of offsite options will then be demonstrated, within the confines of commercial confidentiality. Elements of the solution will be prioritised according to suitability for the necessary range of habitat types / distinctiveness, availability of land, costs and anticipated timescales for delivery.

4 In respect of timescales, to deliver the identified biodiversity value in an ambitious yet realistic timeframe. There are a number of considerations which will influence when the different components of the required biodiversity compensation can be delivered. For instance, with regard to the on-site habitats, there are practical reasons why some areas identified for habitat creation cannot be delivered until the majority of the Teesworks area has been redeveloped, given the practical difficulties of creating and maintaining new habitat within an area undergoing such large-scale redevelopment. The off-site biodiversity values are identified across a range of landownerships with differing existing uses which together determine the appropriate timescales for the delivery of the different off-site options.

5 The Teesworks regeneration Master Plan is a 25 year delivery plan. To, therefore, provide sufficient flexibility to enable the identified habitat enhancement opportunities in the Strategy to change over time, where necessary. This may be as a result of an individual development site being able to provide more biodiversity value within its development plot than originally envisaged as detailed designs are developed at the reserved matters stage of the planning process. Alternatively, it may be as a result of external factors altering the availability or attractiveness of the various off-site options. Furthermore, the Environment Bill includes provisions to allow the Secretary of State to change the metric used to calculate biodiversity value and to change the percentage of biodiversity net gain that must be provided over the pre-development value. To deal with any of these, or other unforeseen, changes in circumstance there is a need to review the Strategy periodically.

4.0 Baseline Assessment and Engagement

4.1 Background work on the Environment & Biodiversity Strategy started in late 2019, at which point it was led by ecology consultants Arup who worked with stakeholders to produce a report in Autumn 2020 summarising how the Strategy had been progressed through a baseline (information gathering) stage and through an initial optioneering stage to identify scenarios for how habitat / biodiversity loss could be mitigated and compensated.

4.2 Arup's report provided a baseline assessment of on-site habitat and its biodiversity value (digitally mapped across the site using GIS), discussed the appropriateness of the BNG metric, summarised the collaboration with stakeholders, considered the ecological principles that could guide the strategy and the options for delivering the strategy before providing a commentary on taking the strategy forward.

4.3 A steering group formed of Teesworks, Arup, Natural England, the Environment Agency, Redcar & Cleveland Borough Council, Lichfields and the Industry Nature Conservation Association (INCA) was formed and met on a number of occasions throughout 2020 including on the following dates:

- 12 March 2020, when the strategy was introduced and discussions were held around the aims and the requirement to achieve BNG (in the longer term); and
- 03 September 2020, when proposed outcomes were agreed in relation to the need for offsite compensation and how this could be achieved.

4.4 Separate meetings were held with the Environment Agency on 30 April 2020 and 05 May 2020 regarding opportunities for offsite habitat enhancement which could help Teesworks to meet their biodiversity obligations.

4.5 A meeting was held with Natural England on 20 August 2020 to discuss detailed issues around use of the metric and its application to different areas and types of habitat.

4.6 The inputs of Natural England, the Environment Agency and Redcar & Cleveland Borough Council have been valuable in shaping the Strategy.

4.7 The Arup report calculated the overall baseline biodiversity value of the Teesworks area and reported the area and BDU value of high distinctiveness habitats that would require like for like compensation. As explained in the following section, this baseline value has since been reviewed and updated by INCA.

5.0 Feasibility and Deliverability

The INCA Biodiversity Strategy Feasibility Report

5.1 In late 2020, INCA took forward the Strategy into the feasibility stage and in June 2021 produced the 'Biodiversity Strategy Feasibility Report' which is provided as Appendix 1.

5.2 INCA was established in 1989 as a result of an identified need to balance the demands of industry and nature conservation on Teesside, and it formed of a small team of specialists with appropriate local knowledge. It is a membership organisation which operates in the Tees Valley on a not for profit basis; it has over 40 members from a range of organisations including chemical and industrial businesses, regulators, conservation organisations and local authorities. As such, INCA has an extensive network of, and relations with, landowners in the Tees Valley and Durham area who may be willing and able to contribute to the delivery of the Strategy.

5.3 The INCA Feasibility Report assesses in detail the feasibility of providing mitigation and compensatory measures to ensure that there would be no net loss of biodiversity value as a result of development within the Teesworks site.

5.4 The report includes a re-assessment of the baseline value of the Teesworks area in respect of its existing area BDUs and River Units (using the Defra Metric 2.0) that could be lost through the planned redevelopment of the area in accordance with the South Tees Regeneration Master Plan and the planning permissions granted or to be granted in the future. The baseline is set out by sub-area within Teesworks according to planning applications which have been submitted and areas described in Teesworks regeneration plans. The baseline values have been recalculated based on revisions to the area included in the baseline and a review of the existing nature and condition of some of the onsite habitats. INCA identified that **a total of 1,334.35 area BDUs and 20 River Units would be lost** should the full extent of redevelopment be achieved across the developable areas of Teesworks.

5.5 The report also identifies a total area for each habitat type that will require like for like compensation due to being classified as high distinctiveness, or because they meet Local Wildlife Site criteria. It also specifies the species that have been identified as being impacted to a significant level in assessments accompanying relevant planning applications, and therefore require like for like compensation.

5.6 The INCA report then presents an assessment of compensatory measures, looking separately at on- and off-site measures, in terms of how many compensatory BDUs could be generated by each land parcel and how the required compensatory habitat types could be provided.

5.7 The onsite compensatory measures identified are based on the potential for habitat creation or enhancement in those parts of the Teesworks area which are not suitable for development due to on-site constraints or where development (including land remediation) is not planned. Importantly, the potential for on-site compensatory measures does not factor in the habitat value achieved through any landscaping proposals for individual development plots as they are currently unknown. However, these will be factored into the on-site compensation once known through periodic updates to this Strategy, and these will increase the value of onsite compensation**. In total INCA have identified the potential to create 349.58 BDUs on-site, within the undevelopable areas of Teesworks.** This excludes new habitat being created within certain development plots that are now capable of being calculated:

- A net gain of 10.49 BDUs is forecast to be created on-site through the Net Zero Teesside[4] development; and
- 8.21 BDUs are to be created on-site within the landscaped areas of the LM Wind[5] turbine manufacturing facility being developed at the South Bank site.

5.8 The off-site measures included in the INCA report are made up of opportunities to provide habitat enhancements on land outside of Teesworks ownership, within the Teesside and south Durham area. The opportunities were identified by INCA through approaching landowners and then following up where appropriate with site surveys to identify existing conditions and the potential to make enhancements which would be capable of delivering compensatory BDUs. An assessment of each site identified as having potential to deliver compensatory BDUs is appended to the INCA report, and a summary table is provided at Appendix 2 to this Strategy. **In total INCA have identified 50 rural and industrial sites, totalling over 400ha with the potential to create 1,582.71 BDUs; those sites being in 14 separate ownerships.**

5.9 The INCA report sets out how the on- and off-site compensatory measures identified can also be used to deliver the required like for like replacement habitats and to compensate for particular species, which have been identified as requiring compensation as described above.

5.10 The INCA report identifies a number of potential solutions to the required compensation of River Units. It notes the need to retain the Lackenby Channel and identifies that through the avoidance of culverting and enhancing the existing condition, the loss of up to 8 River Units could be avoided. Opportunities for onsite provision of compensatory River Units could arise from the implementation of the drainage strategy (which is currently under development), de-culverting other onsite becks (Holme Beck and Knitting Wife Beck) and the appropriate diversion of the Fleet. Offsite opportunities for the provision of compensatory River Units are being discussed with the Tees Rivers Trust and could include naturalising of a section of the River Skerne in Darlington.

Deliverability

On-site enhancement opportunities

5.11 In line with the mitigation hierarchy, this Strategy prioritises the delivery of onsite compensation ahead of offsite compensation. However, it is not feasible to deliver all of the identified onsite measures before commencing delivery of offsite measures. As such the Strategy proposes that the onsite measures identified in Table 4 of the INCA report will be delivered at the earliest practical opportunity.

5.12 The on-site measures that can be delivered ahead of much of the planned development are those at Coatham Marsh (identified in Table 4 of the INCA Report as sites STDC 5, STDC 7 and STDC 8). Whilst much of this this area is within the designated Teesmouth and Cleveland Coast SSSI, Natural England have confirmed that enhancements to habitats which do not form an interest feature of the SSSI are able to be used towards compensatory BDUs. A total of at least 101.89 BDUs can be delivered in the Coatham Marsh area, which will include the provision of 20.89BDUs (across 2.25ha) of Open Mosaic Habitat and potentially 1.13ha of Lowland Calcareous Grassland. There is also potential to deliver compensatory River Units through enhancements to a 1.3km stretch of the Fleet.

[4] Development under consideration: Development Consent Order reference number EN010103
[5] Planning application reference numbers R/2021/0465/FFM and R/2021/0473/ESM – RM.

Commitment no.1: The enhancements at Coatham Marsh will be delivered as soon as reasonably possible. Teesworks are committed to securing approval for a Biodiversity Management and Maintenance Plan for the identified enhancement works at Coatham Marsh and commencing the delivery of the enhancement schemes there within the 2022 calendar year; maintaining those schemes for a 30 year period thereafter.

5.13 A plan illustrating the enhancements that are expected to be achieved at Coatham Marsh is provided at Appendix 4.

5.14 As described, most of the other onsite measures are on the parts of the Teesworks area where development is not feasible. Many of the opportunities are on the land that is on the edges of, or between development plots, including in the corridors beneath powerlines, where it makes practical, financial and ecological sense to deliver new or enhanced habitat once the relevant plots have been developed. This is the case for the onsite opportunities identified as Dorman Point 1-3 (otherwise referred to as Prairies) and Central Hub (south east of the Long Acres development site) in Table 4 of the INCA report.

5.15 The onsite opportunity at 'High Tip' (in Table 4 of the INCA report), is on the site of an existing industrial landfill site, and the creation of the compensatory habitats can only start once the operation on the site for landfill ceases.

Commitment no. 2: Teesworks expects that by mid-2022, the timescales for the delivery of end use development at Prairies / Dorman Point and Long Acres will be much clearer than at present. Teesworks, therefore, commits to provide to RCBC, by September 2022, a detailed programme for the delivery of the habitat enhancement schemes on the remainder of the identified undevelopable land areas within Teesworks that has the potential to yield a BDG uplift of around 247 units (i.e. the remainder of the overall 349.58 BDUs identified outside of development plots in the Teesworks area).

Off-site enhancement opportunities

5.16 In order to understand their commercial viability and to take forward the off-site opportunities identified by INCA, Teesworks commissioned GSC Grays. As one of the largest rural estate agents in the region, GSC Grays offer specialist services to landowners including environmental stewardship and land management (including in respect of biodiversity off-setting). GSC Grays have engaged all landowners who expressed an interest in their land being used for offsite compensatory biodiversity measures to assess the availability and commercial suitability of each site.

5.17 Once availability and suitability are established, a number of factors need to be understood which can affect the timescales within which the offsite compensatory measures can be delivered, and GSC Grays have discussed these with the landowners. These include a range of commercial, practical and commercial factors such as:

- the existing use of the land and how easily or quickly it could be changed if necessary;
- whether the land is tenanted and the duration and type of agreement;
- whether any third party rights need to be considered;

- how long it would take to transform the land from its existing condition to that required to deliver the habitat;
- whether the land is committed to an Agri-environmental scheme and the cost implications of withdrawing from or amending the agreement;
- the current use and income generation potential of the land;
- whether there are any issues in relation to access that would hinder delivery of measures; and
- the cost of delivering and monitoring the enhancements.

5.18 A summary of discussions between GSC Grays and a selection of landowners is provided at Appendix 3 to demonstrate engagement and willingness. The confidential details in this correspondence has been redacted.

5.19 The offsite measures are based on 50 sites totalling over 400ha within the landholdings of 14 landowners where:

- INCA have identified that there is a good likelihood of the identified habitat enhancement/creation succeeding and delivering a suitable range and quantity of habitat enhancements; and
- GSC Grays have established, though detailed evaluation of potential constraints and discussion with those landowners that there is a willingness to enter into legal agreements that give Teesworks the ability to draw on their landholdings in order to deliver habitat schemes.

5.20 The options for delivering the offsite compensatory BDUs have then been prioritised according to the following factors:

1 Number of compensatory BDUs that could be achieved and ability of sites to deliver compensatory habitat types (balanced against when these will likely be lost);

2 Cost of delivering and maintaining the compensatory BDUs; and

3 Practical and commercial ease of delivering compensatory BDUs.

5.21 Initial engagement with landowners by GSC Grays has confirmed that at least seven separate landowners or managers are interested in proceeding with an agreement to provide offsite compensatory biodiversity measures. This willingness to enter into an agreement will invariably be conditional on the terms of the agreement and the financial return that they might receive.

5.22 There is little precedent for this type of agreement or, as yet, an established 'market price' for biodiversity units. It is therefore difficult for the landowners to find, or for Teesworks to provide, examples or indicative values that might help to inform their decision as to whether or not to engage.

5.23 This uncertainty could potentially lead to a high 'drop off rate' at a late stage of the process: each landowner might agree to proceed at this early stage but they would be doing so without sufficient information to make a full commercial decision on whether the opportunity is right for their holding or estate. They may then be deterred by the terms or commercial arrangements later in the process, at which stage time and costs are likely to have been incurred on both sides.

5.24 In order to reduce this risk, a second stage of landowner engagement is proposed following the approval of this Strategy and within the calendar year of 2022. At this stage, Teesworks' representatives will engage with a smaller number of landowners, representative of the larger group of interested parties (to include at least one private owner of rural land and one industrial landowner). The aim will be to develop a detailed proposal for how offsite compensatory

measures would be delivered, including a legal framework, full costings for delivery of the measures and associated payment levels. The legal framework will embody the principles of a 'conservation covenant'. Whilst conservation covenants are not currently permitted in England, the Environment Bill contemplates allowing them to be used for the above purpose. They will comprise a private, voluntary agreement between a landowner and a "responsible" body. In this case, the responsible body is Teesworks. Their purpose is to deliver lasting conservation benefit for the public good. A covenant sets out obligations in respect of the land which will be legally binding not only on the landowner but on subsequent owners of the land. They will demonstrate legally binding obligations to carry out the habitat enhancement works identified for the site and to maintain that enhancement scheme for a period of at least 30 years.

5.25 Landowners whose sites can deliver a higher number of BDUs will be favoured, as it is expected that prioritising these sites will help Teesworks to secure compensatory BDUs equal to or exceeding the losses incurred by the first developments on site, where they potentially could not be met by on-site mitigation.

5.26 Negotiating commercial terms and delivery mechanisms with a smaller sample of landowners, will have a number of advantages:

- It provides models for offsite delivery which can then be considered by other interested landowners, enabling them to make an informed decision on engagement;
- It provides further detail on the options associated with delivering offsite compensatory biodiversity measures via agreements with multiple landowners;
- Sites that progress through the second stage of engagement could be ready for delivery of offsite measures to commence in 12-24 months;
- Will facilitate the development of a model legal framework, which can then be tailored as necessary to future sites; and
- Opportunity for Teesworks to identify potential obstacles to delivery and develop solutions where possible, prior to wider engagement

Commitment no. 3: By end of June 2022, Teesworks and its representatives will have sought to develop model agreements with at least two of the 14 landowners as described above. Teesworks will seek to conclude commercially viable legal agreements with those landowners such that works to implement the mitigation schemes commence by end of 2022 and are completed by end of 2023.

Assigning compensation provision to losses

5.27 The loss in biodiversity value that will arise from the development of the Teesworks area will occur incrementally as individual plots are remediated and developed for end uses. The compensatory biodiversity measures will be provided from a range of options as required to compensate losses. Whilst the total loss of biodiversity value from the development planned at Teesworks can be compensated if third party land can be made available, the number of BDUs provided by the individual compensatory measures cannot be neatly matched up to the losses that will be incurred from individual developments. Furthermore, it makes sense for each compensatory measure to be provided in full, rather than in a piecemeal fashion (i.e. if a single measure can provide 100 BDUs, it is envisaged that all of these would be delivered together rather than providing 70 units at one time and 30 units at another).

5.28 This means that there is likely be a mismatch in the loss of existing and provision of compensatory BDUs at any one time. For this reason, it is proposed to use a pooled approach to

assign the provision of compensatory BDUs and habitat types to losses arising from development plots. The delivery of compensatory provision (of BDUs and habitat types) will be monitored, through updates to this Strategy. The mechanism for securing the provision of compensation will be through the discharge of conditions attached to individual permissions (such as that shown in section 2) that will link back to this Strategy. Further details are provided in the next section of the approach to monitoring delivery.

6.0 Reporting and Monitoring

6.1 In order to ensure that the commitments made in this Strategy, and future iterations of it, are delivered and maintained, it is necessary to establish and commit to a reporting and monitoring regime. To that end, when Teesworks commits to the delivery of individual compensatory measures, both on- or off- site, through the discharge of relevant planning conditions, it will also automatically commit to the reporting and monitoring regime set out below.

6.2 The draft Environment Bill contemplates requiring on- and known off-site habitat enhancements to be maintained for at least 30 years. As this strategy aims to meet the proposed requirements of the emerging Environment Bill, Teesworks will ensure maintenance of any on- and off- site habitat creation/enhancements for a period of 30 years.

6.3 In September 2022, Teesworks will provide a monitoring report to Redcar and Cleveland Borough Council which demonstrates the progress made with establishing model agreements with targeted landowners off-site and any legal commitments reached with those owners to commence delivery of off-site habitat enhancements during the calendar year of 2023. In December 2022, Teesworks will update and submit that monitoring report to confirm what off-site provision is targeted for delivery during 2023. That report will also demonstrate the provision of the appropriate enhancement measures at Coatham Marsh to deliver the onsite compensatory habitats agreed through the Biodiversity Management and Maintenance Plan (delivered during 2022) and maintained thereafter by the Teesworks Management Company.

6.4 Upon committing to each compensatory measure on and off site, Teesworks will submit to Redcar and Cleveland Borough Council, for each parcel of land where compensation is to be provided, a Biodiversity Management and Maintenance Plan, which will provide the following information:

- Location and size of site;
- Existing condition and baseline BDU assessment (to include plan and site photographs);
- Target habitat and condition with post-development BDU value (to include plan); and
- Description of measures that will be implemented to reach target condition with anticipated timescales and any requirements re timings of work.

6.5 In respect of Coatham Marsh, the above information will be provided prior to commencement of the enhancement works thereon. Thereafter (i.e. after the December 2022 monitoring report) Teesworks will submit a monitoring report to RCBC encompassing all active compensatory sites, updating the information above with progress towards the target condition, to include site photographs. It is proposed this monitoring report will be submitted to the Council every three years for the remainder of the 30 year monitoring periods.

6.6 The periodic monitoring report will include provisions for instances where the target habitat/condition is not met within the anticipated timeframe. It is possible that there will be cases where, despite the appropriate ecological conditions being established, the target habitat/condition does not develop as anticipated. The accompanying Feasibility Report demonstrates a sufficient range of sites have been identified at this stage to deliver BDUs greater than the baseline value of the Teesworks site.

6.7 RCBC may wish to undertake site inspections (or to commission a third party to do so on their behalf) to verify the information in the monitoring reports submitted by Teesworks. It is suggested that this function best sits with the Council's planning enforcement team.

6.8 As explained in section 5.0, where the compensatory provision is to be made on land outside of Teesworks' ownership, Teesworks will require the landowner to enter into a legal framework, copies of which will be provided on a confidential / redacted basis to RCBC to demonstrate the terms of delivery.

6.9 In summary, therefore, Teesworks proposes:

1 To submit a "one-off" report in September 2022 that:

a) provides a programme for the delivery of on-site enhancement schemes (other than Coatham Marsh) – see "Commitment no.2" in Section 5; and

b) provides an update of the progress made to create model legal agreements with landowners for the delivery of off-site enhancements; and

2 To provide, in December 2022 and on an annual basis thereafter, a monitoring report. In the first instance, this report will confirm the delivery of the measures at Coatham Marsh to be agreed through the submission of a Biodiversity Management and Maintenance Plan and will set out the progress made with off-site landowners to commit further off-site enhancement schemes. Thereafter, the annual report will also set out a programme of the anticipated timescales for delivering off-site enhancement schemes committed through legal agreements with landowners. Finally, every third year (i.e. every three years from December 2025 onwards) the report will be updated to provide information sufficient to monitor the condition of committed on- and off-site compensatory provision in accordance with individual Biodiversity Management and Monitoring Plans.

7.0 Next Steps

7.1 It is requested that Redcar and Cleveland Borough Council review and agree to this Strategy in order to discharge the following planning conditions:

- condition 6 of planning permission R/2020/0318/FFM (ground remediation and preparation at the Grangetown Prairie site);
- condition 8 of planning permission R/2020/0357/OOM (outline permission for the development of industrial and/or storage and distribution uses and ancillary office floorspace at South Bank);
- condition 7b of planning permission R/2020/0684/ESM (development of new quay and associated works (phase 1) at South Bank).

7.2 Any discharge of condition would be made on the basis that:

1 the three stated commitments set out in Section 5.0 of this Strategy are fulfilled by Teesworks; and

2 the reporting and monitoring regime set out in Section 6.0 of this Strategy is adhered to by Teesworks.

Annex 1: Planning Permission tracker

Table 1

Planning permission reference	Summary of planning permission	Biodiversity value to be lost (BDUs)*	Habitats requiring like for like compensation (type, BDUs)*	Date planning condition requires submission of strategy and status	Compensation provision identified, site ref and status
R/2019/0767/OOM	Outline permission for Energy Recovery Facility at Grangetown Prairie	To be confirmed	To be confirmed	Prior to commencement of development	No
R/2020/0318/FFM	Site Remediation and preparation at Grangetown Prairie	173.58 (area units)	Open Mosaic Habitat – 24.9	30/09/21 discharge application submitted date	No
R/2020/0357/OOM	Outline permission for the development of industrial and/or storage and distribution uses and ancillary office floorspace at South Bank	363.55 (area units) 20 (river units)	Open Mosaic Habitat – 58.55 Lowland calcareous grassland – 34.61 Reedbeds – 2.38	03/12/21 condition not discharged	No
R/2020/0684/ESM	Southbank Quay Phase 1	To be confirmed	To be confirmed	19/03/22	No
R/2020/0685/ESM	Southbank Quay Phase 2	To be confirmed	To be confirmed	19/03/22	No

Notes

*Values may change with subsequent baseline assessment or more detailed layouts being approved at reserved matters stage

Appendix 1 INCA Biodiversity Strategy Feasibility Report

Report ID INCA 2021-44

Biodiversity strategy feasibility report

Teesworks

Ian Bond

June 2021

Industry Nature Conservation Association

Contents

1. Introduction

This report has been produced for Teesworks as Stage 3 of their Biodiversity Strategy. The purpose of this stage of the Biodiversity Strategy is to demonstrate the feasibility of providing mitigation and compensatory measures to ensure that there would be no net loss of biodiversity as a result of development within the Teesworks site.

Stage 3 of the Biodiversity Strategy has been undertaken by INCA and builds on and refines Stages 1 & 2 of a wider Environment and Biodiversity Strategy [1], which were produced by ARUP.

This report is based on the current situation. The biodiversity Strategy is by its nature an iterative process and will require a series of amendments, for example should development plans change or landscaping proposals be put forward, or following the publication of an updated Biodiversity Metric.

2. Objectives

The Biodiversity Strategy has the following objectives:

- To investigate the opportunities for mitigation, i.e. the potential to retain and/or improve areas of habitat on-site;
- To compensate for the overall loss of biodiversity as quantified by a Biodiversity Metric, such that there is no net loss of biodiversity and if possible net gain;
- To compensate on a like-for-like basis, as far as is reasonably possible, for the loss of habitats of which are i) classed under the Biodiversity Metric as being high distinctiveness, or ii) would meet the criteria for designation as Local Wildlife Sites. This includes all such examples as identified in various planning applications pertaining to the site;
- To compensate on a like-for-like basis, as far as is reasonably possible, for the loss of significant populations of particular species or groups of species. This includes all such examples as identified in various planning applications pertaining to the site.

3. Assessment Methods

3.1 Biodiversity Units

In order to produce a quantitative assessment of the biodiversity losses on the Teesworks site and of the opportunities for biodiversity gain, both on site and ex-situ, the Defra Biodiversity Metric 2.0 (BM2.0) [4] has been used. The technical guidance provided with BM2.0 provides a description of each habitat type and in most cases some guidance on how to ascertain the condition of each of those habitats. As habitats vary considerably due to a range of factors, this guidance is unavoidably far from comprehensive and some degree of professional judgement is required in assigning a condition score to each habitat. For certain habitats, BM2.0 provides little guidance on differentiating condition and this is particularly the case with regards to the "Brownfield" habitats which make up the majority of the Teesworks site. To assist in the assessment of condition in those cases, INCA devised some supplementary, objective guidance to be used in conjunction with BM2.0. This INCA supplementary guidance is set out in Stage 2 of the Teesworks Environment and Biodiversity Strategy and has been used in conjunction with BM2.0 to assess both existing habitats on Teesworks and the opportunities for compensatory habitat creation and enhancement.

Biodiversity losses and gains are calculated in terms of Biodiversity Units (BDUs). With BM2.0, the baseline for the number of BDUs associated with a particular area of habitat is calculated by multiplying five variables; the area of the habitat; the distinctiveness of the habitat type; the condition of the habitat; the extent to which it is connected to other habitats of the same type and the strategic significance of that habitat in that specific area.

When calculating the number of BDUs that can be achieved from habitat creation or enhancement, two further multipliers are applied to account for; time to target condition and difficulty of creation. These typically reduce the number of BDUs which might be achieved, for example habitat that is difficult to create might have a multiplier of 0.33 meaning that three times as much habitat needs to be created as has been lost to account for the uncertainty in achieving the required condition. A further multiplier is applied for ex-situ sites that are outside of both the LPA area and the Natural Character Area where the development occurs. This further reduces the number of BDUs which can be achieved.

3.2 River Units

As watercourses are linear in nature, rather than area-based, Defra has devised a separate Rivers Metric provide a quantified assessment of the ecological value of watercourses, based on a specific Rivers Condition Assessment. This multiplies the length of the watercourse in kilometres with values for the Distinctiveness, Condition and Strategic Significance of the watercourse with the resulting value expressed as River Units. This Rivers Condition Assessment has been used to calculate the number of River Units that would be lost as a result of developments on Teesworks and will also be used to quantify potential gains.

4. Baseline Assessment

4.1 Biodiversity Units

The calculation as to the total number of BDUs which will be lost is based on the planning applications submitted by Teesworks, plus other areas that will be lost either as part of developments taken forward by other developers or which it is assumed will otherwise be lost as part of the future redevelopment of the site. Table 1 identifies the BDUs that are calculated to be lost for each area. These calculations assume that all habitats will be lost within each of those areas. Items 1-6 in Table 1 are the over-arching areas covered by planning applications submitted by Teesworks; any other planning applications falling wholly within those areas would therefore not result in the loss of any further BDUs.

Table 1 also gives the total number of BDUs for which compensation is required, i.e. **1334.35**. This is a reduction from the figure of 1920 BDUs, which was identified at Stage 2 of the Environment and Biodiversity Strategy. There are three main reasons for this reduction. Firstly a large area of land which was included within the initial calculation is outside of the Teesworks area so needed to be discounted. Secondly, a review of the habitats for planning applications subsequent to the production of Stage 2 found that some areas, notably Long Acres and The Foundry, had been incorrectly assigned to higher distinctiveness habitats than was actually the case. Thirdly the land required for the NZT project was less than had been assumed to be the case in the original calculations.

Table 1. The number of Biodiversity Units which will be lost to Teesworks developments

Location	**BDUs**
1. South Bank	363.55
2. The Foundry	147.4
3. Steel House	44.64
4. Lackenby	11.3
5. Long Acres	318.84
6. Dorman Point	162.15
7. Eston Road (outside Dorman Point RLB)	1
8. Grangetown Prairie remediation (outside Dorman Point RLB)	9.12
9. Grangetown Prairie Phase 4	15
10. Infrastructure corridor	63.8
11. Net Zero	151.9
12. High Tip (outside South Bank RLB)	10
13. Anglo-American Conveyer route	23
14. South Bank Quay	12.65
Total	1334.35

Notes on Table 1:

- Items 7, 8 & 12 are calculated only for those parts of the development which are not covered by the respective, adjacent planning applications.
- Item 10 is taken from the calculations undertaken by ARUP for Stage 2. The exact boundaries on which this calculation was based are unclear so this figure may change.
- Item 11 is based on the current understanding of the areas of habitat to be lost to the NZT project.
- Item 13 is based on the loss of all habitats within the red line boundary of a corridor that the conveyer would cross.
- Item 14 may increase slightly depending on the exact definition of the existing intertidal habitat.

4.2 Particular habitats.

Table 2 lists the total area (hectares) of the various habitat types on the site that are i) classed under BM 2.0 as being of high distinctiveness, or ii) would meet the criteria for designation as Local Wildlife Sites. These habitats require like-for-like compensation, as far as is reasonably possible.

Table 2. Habitats requiring compensation

Habitat	**Area (ha)**	**Notes**
Open Mosaic Habitats	9.54	High distinctiveness habitat
Swamp/ Reedbed	0.82	High distinctiveness habitat
Lowland Calcareous Grassland	2.60	High distinctiveness habitat
Open Water	0.42	High distinctiveness habitat
Intertidal – Littoral mixed sediments	2.50	High distinctiveness habitat
Dune Grassland	0.51	Meets LWS criteria
Other Neutral Grassland	1.81	Meets LWS criteria
Ruderal/ Ephemeral	13.23	Meets LWS criteria

4.3 River Units

The only watercourses which have been identified as being lost to development are Lackenby and Cleveland Channels, which were assessed by ARUP in the EIA for the planning application covering the South Industrial Zone.

Both channels are 1km in length and were assessed as being of medium Distinctiveness, moderate Condition and low Strategic Significance. This resulted in a score of 12 River Units per watercourse. Therefore mitigation or compensatory measures on this basis would be required for a total of 24 River Units.

The condition of both Cleveland and Lackenby Channels has been re-assessed by Tees River Trust using the standard Rivers Condition Assessment. The re-assessment agreed with the ARUP assessment of Cleveland Channel as being in moderate condition, thereby continuing to score 12. However Lackenby Channel was re-assessed as being in fairly poor condition thereby scoring 8 River Units.

The assessment by Tees Rivers Trust is likely to be the more accurate description as it was thoroughly assessed on-site by a qualified practitioner whereas the ARUP assessment was conducted on the basis of the data that was available as it was not possible to survey the channels fully at the time the EIA was submitted. Based on the Tees Rivers Trust assessment, mitigation or compensation will be required for a total of **20** River Units.

4.4 Particular species

Table 3 lists the species, or groups of species, that have been identified in the Environmental Impact Assessments that accompanied planning applications for the Teesworks site as being impacted to a significant level, ie County level or above, either as part of an individual application or as a cumulative impact across the entire Teesworks site. Significance at the County level is defined as i) meeting the criteria for designation as a Tees Valley Local Wildlife Site, ii) forming a significant proportion of the population of that species in the former Cleveland county area. Regional importance is defined as forming a significant proportion of the population of that species in North East England. These species require like-for-like compensation, as far as is reasonably possible.

Table 3. Species requiring compensation

Taxon	Importance	Justification
Dingy Skipper butterfly	Regional	A population of 10 or more individuals is of County importance. This occurs on several discrete locations on Teesworks, with the total population likely to exceed 100.
Grayling butterfly	Regional	The total population across Teesworks is likely to be well in excess of 100 and to be higher than on the adjacent SSSI, for which it is an interest feature.
Common Lizard	County	All lowland populations of lizards. A population of at least medium size, i.e. >50 individuals, exists across various parts of Long Acres
Common Toad	County	The species is widespread across the Teesworks site. The total population is unknown but is assumed to be of County importance based on the precautionary principle.

Brown Hare	County	No site criteria exist as the species is wide-ranging however Teesworks is a local stronghold for the species.
Odonata (dragonflies and damselflies)	County	Particular species present on Dorman Point, namely Emperor Dragonfly and Black-tailed Skimmer, meet the Local Wildlife Site criteria. It is likely that the assemblage of Odonata species across Teesworks would also meet the relevant criteria
Nesting Birds	County	The total assemblage of nesting birds across the entire site would be of County significance given the scale and diversity of habitats present.
Wintering Birds	County	This was identified in the EIA for South Bank. Re-assessment of bird numbers, including of South Bank quay intertidal suggests that the wintering population is not of County importance. Nevertheless compensatory measures will address wintering birds.

5. Assessment of compensatory measures

The assessment of opportunities for compensatory BDUs has used the BM2.0 metric, except that the connectivity multiplier has not been used for either the baseline or target value. This is because the connectivity multiplier will not form part of the BM3.0 metric, which is the metric which will need to be used for future calculations therefore it was considered to be more appropriate to calculate both the baseline and the future target values on the same basis.

The assessment of compensatory River Units has used the same River Condition Assessment as that used to calculate the loss of River Units.

5.1 On- site mitigation and compensatory measures

On-site mitigation and compensatory measures that have been considered are on areas which are not scheduled for development or remediation and those where the land has been cleared as part of the remediation process but which are not suitable for development.

On-site compensatory measures also include enhancements to parts of the Teesmouth and Cleveland Coast SSSI and adjacent, non-designated areas, which come under Teesworks ownership. Natural England has confirmed (email from Andrew Whitehead dated 14th April 2021) that it is acceptable to claim BDUs for enhancements to SSSI habitats where those do not form an interest feature of the SSSI. As a result of this, potential enhancements have been identified to grassland and reedbed at Coatham Marsh but no potential enhancements could be identified at South Gare as the habitats there comprised sand dune and saltmarsh, which are designated interest features of the SSSI.

On-site compensatory measures detailed in the current report do not include any consideration of landscaping proposals which will form part of future development plots. This is because landscape proposals are not known at this point in time. Clearly there will be significant opportunity for landscaping and it is worth noting that all forms of landscaping, including those of a formal or

ornamental nature, would generate BDUs. Any landscaping proposals and the BDUs generated thereby will be incorporated into the assessments in future iterations of this report as they come forward.

5.2 Ex-situ compensatory measures

Even allowing for significant landscaping on Teesworks there is likely to be a requirement for ex-situ compensatory measures both in terms of the overall number of BDUs and for particular habitats or species which it will no longer be possible or appropriate to re-create or accommodate on the Teesworks area.

INCA has investigated options with various landowners across the Tees Valley and immediately surrounding area. A total of 72 landowners were contact for expressions of interest of which 28 expressed an interest in investigating the options for using part of their land as compensatory habitat. Of these, INCA visited 50 sites from 14 different landowners and carried out an assessment of the current biodiversity value of their land and an assessment of the habitat creation and enhancement options that would be feasible on that land.

Not all areas of land where the landowner expressed an interest were surveyed as it became apparent that there would be a significant oversupply of potential BDUs. Nevertheless there is the potential to follow those up should it be necessary.

A report was created for each site, including assessments of the current and target habitats and the net gain in BDUs. Where it was feasible for more than one target habitat on an area of land, the option recommended was based on a number of factors including; maximising the BDUs; the opportunity to create particular habitats that are required; the appropriateness of the habitat in ecological terms in that location, in order to both establish and manage the habitat successfully.

6. Results

6.1 On-site mitigation and compensation measures

Currently a total of six areas have been identified within Teesworks for habitat creation or enhancement. Five of these are areas that have been or will be cleared of vegetation as part of the re-development of the site and the loss of BDUs has been included in Table 1. Their baseline is therefore zero and any habitat created on them would get the full number of BDUs allowable for that area. The sixth area, described tentatively as the “Central Hub”, situated to the west of Long Acres, is not currently scheduled for vegetation removal, except where the route of the AngloAmerican conveyer is likely to cross it, therefore any BDUs created through enhancements in this area would be net gain over the existing habitats. A list of these habitat creation or enhancement opportunities is given in Table 4, and the areas of each site are shown at Appendix 1.

In addition to the six areas above, habitat enhancements have been identified at Coatham Marsh, following discussions with Tees Valley Wildlife Trust. The main ones in terms of areas are listed in Table 4 but it may be possible to create some further small areas of more specialist habitats if required.

In total the potential to create **349.58** BDUs on site has been identified.

Table 4. Summary of on-site habitat opportunities.

Ref.	Location	Area	New Habitat	Net BDUs
STDC 1	Dorman Point 1	2.00	OMH	18.57
STDC 2	Dorman Point 2	7.50	OMH	69.65
STDC 3	Dorman Point 3	2.50	Urban - introduced shrub	12.06
STDC 4	High Tip *	ca16	various	ca 100
STDC 5	Long Acres/ Coatham Marsh buffer**	2.25	OMH	20.89
STDC 6	Central Hub **	9.3	various	47.41
STDC 7	Coatham Marsh grassland ***	12.95	enhance existing	40
STDC 8	Coatham Marsh reedbed	14.44	enhance existing	41
	Total			349.58

6.2 Ex-situ compensatory measures

A total of 50 areas of land, totalling over 400ha, were assessed for their current biodiversity value and for their potential for habitat creation and enhancement. The difference between their current value and target value in terms of BDUs was then calculated, allowing for the required multipliers of "time to target condition" and "difficulty of creation" and, where appropriate, location. Of those 50 areas, four were marginally outside of the Tees Lowlands Natural Character Area, so incurred the location multiplier, which reduced their target value by a further 25 per cent.

In total the potential to create **1582.71** BDUs has so far been identified outside of Teesworks.

In addition to describing the current and target conditions and the resulting uplift in BDUs, each site report outlines the habitat management prescriptions that would be required to achieve the target condition, along with any constraints.

6.3 Particular habitats

This section identifies how the compensation for particular habitats as listed in Table 2, can potentially be addressed.

6.3.1 Open Mosaic Habitats (OMH)
There is a requirement for the provision of 9.54ha of OMH. The potential to create a total of approximately 14.75ha of OMH on-site has been identified, of which 9.5ha would be at Dorman Point, 2.25ha on the Coatham Marsh buffer and approximately 3ha at High Tip. The potential to create a further 4.3ha of OMH has been identified on two industrial sites elsewhere in the Tees Valley. There is therefore the potential to create **19.05ha** of OMH.

6.3.2 Ruderal/ ephemeral
A large proportion of the habitats that would be lost on Teesworks were classed as ruderal/ephemeral but specific compensation is only required for those areas that were high enough quality to meet the criteria for designation as Local Wildlife Site under the "Urban Grasslands" criteria. This comes to a total of 13.23ha. Open Mosaic Habitat is a specialised, higher value subset of ruderal/ephemeral therefore any oversupply of OMH would fulfil the requirement for ruderal/ephemeral, while at the same time providing more BDUs. The potential to create 8ha of

ruderal/ephemeral has been identified on an industrial site in Stockton. The total requirement for OMH and ruderal/ephemeral together is 22.77ha and the potential for a total of **27.05ha** across both habitats has been identified, therefore this requirement can be met on that basis.

There is the potential to create additional ruderal/ephemeral, potentially up to 30ha, on other industrial sites in Stockton, should any of the above opportunities not materialise however the baseline habitats in those locations means that there would be little or no net gain of BDUs.

6.3.3 Swamp/ Reedbed

There is the requirement for the provision of 0.82ha of reedbed/swamp. The potential to create **1ha** of reedbed/swamp has been identified on an industrial site in Stockton. In addition it would be quite straightforward to create reedbed/swamp on several of the rural sites, simply by excavating a shallow scrape in low-lying areas and planting with reed or other wetland plants.

6.3.4 Open Water

There is the provision for the creation of 0.42ha of open water. This is entirely associated with The Foundry site and it is currently unclear whether that open water will actually be lost, however provision of replacement habitat has been considered as if it will be lost. As with reedbed/swamp this could easily be accommodated by excavating ponds in some of the low-lying land in the rural areas.

6.3.5 Dune Grassland

A total of 0.51ha of Dune Grassland has been identified as requiring compensation. The area of land which was classed as Dune Grassland was in a sense "artificial" in that it was isolated from other such habitats and was effectively a specialised form of "brownfield" habitat based on a sandy substrate, rather than conforming closely to any of the dune grassland vegetation communities in the National Vegetation Classification. Nevertheless it was of high quality and its flora included several indicator species of local of the local coastal habitats.

The recreation of this type of habitat would require the provision of a substrate with a relatively high proportion of sand. Given that it was an isolated habitat to begin with, it could in theory be re-created anywhere. Nevertheless it would be most effective if created adjacent to existing coastal habitats. As such there is likely to be abundant scope to recreate this habitat as part of the proposed landscaping that has been identified for the NZT project, simply by the provision of additional sand in the substrate and a slight amendment to the wildflower species mix that is sown. It should also be noted that as much of the NZT landscaping would be adjacent to coastal grassland then those areas would be expected to accumulate species typical of dune grassland over time in any case.

6.3.6 Other neutral grassland

As with ruderal/ephemeral, a significant proportion of the habitats on Teesworks were classed as "Other neutral grassland" but specific compensation is only required for those areas that were high enough quality to meet the criteria for designation as Local Wildlife Site under the "Neutral Grasslands" criteria. This comes to 1.81ha. The majority of the opportunities for habitat creation that have been identified in the rural areas are for species-rich neutral grassland, totaling several hundred hectares, therefore this requirement can be easily met.

6.3.7 Lowland calcareous grassland

A total of 2.6ha of Lowland calcareous grassland has been identified as requiring compensation. To create suitable conditions for this habitat would require a base-rich substrate such as good quality blast furnace slag or dolomite. None of the areas that have been identified for grassland creation

are thought to have a suitable substrate though some have elements of blast-furnace slag so may merit further investigation. Therefore it is likely that importation of material will be required to form a layer of a suitable depth to retain its calcareous nature. As such Lowland calcareous grassland could be created on any of the areas identified for grassland creation however in terms of costs it may prove less expensive to create around Teesworks.

Two areas of Coatham Marsh of totalling 1.13ha have been identified by Tees Valley Wildlife Trust for aspirational wildflower meadow creation. (This is in addition to the 12.95ha of grassland which has been identified as a possible on-site enhancement in section 6.1.) Both areas could be prepared with a suitable substrate to enable the creation of Lowland calcareous grassland.

6.3.8 Inter tidal

A loss of 2.5ha of intertidal has been identified. This is entirely associated with the removal of the intertidal area in front of South Bank Wharf. This area has been identified by RHDHV as artificial in nature and comprises mixed sediments. It is assumed that similar extent of replacement intertidal will be required.

Currently no on-site opportunities for intertidal habitat creation have been proposed although it is feasible that it would be possible to do this to some limited extent where water courses join the river.

An opportunity to create 0.3ha of intertidal saltmarsh beside the intertidal stretch of Billingham Beck has been identified.

The Environment Agency has proposals for a number of schemes along the Tees for the creation of intertidal habitat. These have the potential to achieve well in excess of that required to compensate for South Bank Quay therefore the compensatory habitat could be achieved by contributing to one or more of those schemes.

6.4 Rivers Metric

Using the reassessment of Cleveland and Lackenby Channels by the Tees Rivers Trust, compensation for a total of 20 River Units would be required.

6.4.1 On-site opportunities.

The drainage strategy has not been finalised but a number of options are under consideration which could achieve or contribute to the required River Units.

Enhancements to 1.3km of the Fleet, where it flows through Coatham Marsh have been identified. Assuming that it is possible to uplift it by one condition category then this would result in approximately 5 River Units.

It will be necessary to retain Lackenby Channel as a conduit for the existing watercourses that discharge into it. Should it be possible to avoid culverting Lackenby Channel then the loss of 8 River Units associated with it would be avoided, leaving a deficit of 12 River Units. It may also be possible to enhance Lackenby Channel from moderate to fairly good condition thereby creating 4 River Units. There is the potential to deculvert Holme Beck and Knitting Wife Beck. Together these would create something like 3.5km of open watercourse. The number of River Units that would be associated with this has not yet been calculated as these measures are still under consideration however it

seems likely that they could easily achieve the required number of River Units given the lengths of water courses that would be involved.

There is also a proposal to divert the Fleet from its current course across the development site. Again no details are currently available however it has the potential to enhance the condition of approximately 1km of watercourse and if would result in a gain of 4 River Units for each category of improvement, for example from poor to fairly poor.

6.4.1 Ex-situ opportunities

Discussions are being undertaken with Tees Rivers Trust regarding the opportunities for enhancements to watercourses elsewhere in the Tees catchment, which Teesworks could contribute to. The most likely option is the naturalising of a section of the River Skerne in Darlington. The potential uplift in River Units associated with this proposal has not yet been calculated however as it would be across approximately 1km of watercourse then 4 River Units would be created for each category of improvement.

6.5 Particular species

This section identifies how the compensation for particular species as listed in Table 3, can potentially be addressed. With compensation for species there is greater uncertainty than with habitats, as populations are influenced by a number of factors, for example disease, surrounding land use and climatic conditions, which are outside of any reasonably practical control measures. This section therefore focuses on the habitat provision necessary to accommodate particular species to something approximating to the levels that have been predicted to be lost.

6.5.1 Dingy Skipper butterfly
Dingy Skipper requires open habitats in association with its larval foodplant, Birds-foot Trefoil *Lotus corniculatus*. It does not require extensive areas of habitat in order to maintain a healthy population, for example a population of county importance occurs on a site in Hartlepool that has at most 1.5ha of suitable habitat.

As part of the requirement to re-create particular habitats, it will be necessary to create a total of 22.77ha of OMH or ruderal/ephemeral habitats. These habitats can be of high value for Dingy Skipper provided that the larval foodplant is available and this plant can easily be introduced from seed. Therefore there would seem to be the potential to create sufficient habitat to retain a population of Dingy Skipper of regional importance.

6.5.2 Grayling butterfly
Grayling requires habitats with similar physical structure to those required by Dingy Skipper, therefore the 22.77ha of OMH and ruderal/ephemeral habitats that are predicted to support Dingy Skipper are also likely to be suitable to support Grayling. The larval foodplant of Grayling is grasses and in particular on brownfield sites on Teesside, Red Fescue *Festuca rubra*. This grass is a common constituent of brownfield habitats and if it does not colonise naturally then it can readily be introduced from seed.

Grayling can likewise occur at high densities in suitable habitat and, for example, a population of in excess of 50 has been recorded on an area of approximately 3.5ha on Teesworks. Therefore the creation of 22.77ha of suitable habitat is considered likely to support a population of Grayling of regional importance.

6.5.3 Common Lizard
The Common Lizards which are present on Teesworks will need to be caught and translocated to an alternative site to avoid harm. A suitable receptor site has been identified on grassland on the south side of Coatham Marsh. Tees Valley Wildlife Trust is undertaking work to improve this site for Common Lizards by creating hibernacula and basking areas. As this is a relatively large site which will be managed to ensure that it remains suitable to support a population of Common Lizards, then it is considered that the numbers of Common Lizards locally will be maintained.

6.5.4 Common Toad
Common Toad breeds in most of the waterbodies on the Teesworks site and will be present across most of the terrestrial areas. It is likely to continue to have a presence on Teesworks post development, as Steel House Lake would remain as a breeding location but in the meantime its population will be significantly impacted as terrestrial habitats are cleared.

In the medium to long term, as landscaping is re-instated, there will be new terrestrial habitat for Common Toad and any inclusion of SUDS as part of the drainage scheme or ornamental ponds as part of the landscaping would provide additional breeding opportunities. Therefore the numbers of Common Toad are predicted to increase again though as details of future landscaping or waterbodies are not known at present then it cannot be guaranteed that something of the order of the current population will be supported on-site in the long term.

It will be necessary to create Open Water habitats as part of the requirement for particular habitats. These can be tailored to accommodate Common Toad, which typically require ponds of minimum 20m diameter and 90cm depth.

This combination of on-site and ex-situ habitat creation is considered sufficient to compensate for the estimated Common Toad population that would be lost in the meantime.

6.5.5 Brown Hare
The high numbers of Brown Hare on Teesworks are probably due as much to the lack of disturbance as to the extensive areas of habitat. Indeed, as many areas of habitat on Teesworks have quite sparse vegetation then they are likely to be sub-optimal in terms of quality. As suitable habitat for Brown Hare is present in the surrounding area and to some extent will remain at Teesworks post development, then Brown Hare is likely to recolonise Teesworks as landscaping is provided. As can be observed on the nearby Wilton Industrial Complex, Brown Hare will graze extensively on mown grass verges, which are likely to provide a more concentrated food source than the more open habitats. Therefore future landscaping at Teesworks, which is likely to provide a higher proportion of managed grass or meadow than is currently the case, could potentially support a higher population of Brown Hare per unit area than is currently the case.

Nevertheless there is still predicted to be a net reduction in the number of Brown Hares on site. However, much of the ex-situ mitigation to achieve the requisite number of BDUs is likely to be in the form of creation or enhancement of grassland which is suitable habitat for Brown Hare. A combination of on-site landscaping and ex-situ habitat creation and enhancement could therefore potentially support a population of Brown Hare of similar size to that which currently exists on Teesworks.

6.5.6 Odonata
The dragonfly species which met the criterion for Local Wildlife Site designation were associated with several small, shallow pools on Dorman Point whose total area was less than 0.2ha, along with a short stretch of watercourse at the confluence of Cleveland and Lackenby Channel. Compensatory habitat to meet the requirements of dragonflies would be created as part of the requirement to re-

create 0.42ha of Open Water. This could be done either by creating some of the Open Water in the form of shallow pools or else by creating shallow areas in larger ponds.

6.5.7 Nesting birds

The nesting bird assemblage on Teesworks is judged to be of County importance due to the scale of the area across which it occurs and the variety of habitats, rather than the nature of the assemblage itself.

The only individual species for which this site might be classed as being of County importance is Peregrine, of which at least two pairs nest on Teesworks, representing approximately half of the breeding population of Teesside. It is unlikely to be possible to mitigate for the loss of Peregrine due to their requirement for tall structures to nest on, though it should be noted that other tall structures that are potentially suitable for them to nest on occur on other industrial sites on Teesside.

Another species which occurs at a relatively high density on Teesworks is Barn Owl, of which at least three pairs are thought to be present. Nesting opportunities for Barn Owl could easily be accommodated on site by the provision of purpose-built structures or by adapting existing structures. In the first instance boxes will be erected to provide temporary nesting opportunities and as final layouts are known then permanent brick-built structures can be erected in suitable locations. In addition it should certainly be possible to install Barn Owl nest boxes on some of the ex-situ land which is used for compensatory habitat provision.

Shelduck has been flagged up as being a breeding species of particular importance on Teesworks. However, it is thought that the total population on Teesworks is only around 3-4 pairs out of a breeding population across Cleveland that is in excess of 60 pairs. It may be possible to compensate for the loss of nesting Shelduck through the provision of artificial nesting burrows on compensatory habitats close to watercourses and waterbodies, so the impact is considered to be minor given the relatively low population of this species on site.

Extensive areas of compensatory habitat will be created on site and ex-situ, encompassing a variety of habitats. These are likely to accommodate a nesting bird assemblage of similar importance to that which would be lost.

6.5.8 Wintering birds

As with nesting birds, the compensatory habitat is likely to accommodate a wintering bird assemblage of similar importance to that which would be lost.

Of particular significance is the replacement intertidal habitat which will be required. The current intertidal habitat has very low use by wintering birds, in part because it is of low quality but also because sightlines are heavily constrained by the existing jetty and quay. Replacement intertidal habitat would not be similarly constrained and will either be higher quality or else more extensive, so is likely to support higher numbers of wintering birds than is currently the case.

7. Updating the strategy

As stated in the introduction the Biodiversity Strategy is an iterative process with updates required as new information becomes available. In particular, the calculations of the number of BDUs that would be lost and, conversely of those could potentially be created, have been based on two very broad assumptions.

The number of BDUs that would be lost has assumed that all habitats within each red line boundary that has been assessed would be lost. While this may be the case for some areas there will be some examples where habitat will be retained, for example along wayleaves. Where this is the case then the figure for the number of BDUs that would be lost will need to be reduced to reflect this.

The assessment of the number of BDUs that could potentially be created on-site has assumed that there would be no landscaping associated with any of the development plots. In practice this will not be the case and all proposals for landscaping, including formal landscaping using cultivated species, would generate some BDUs. In some cases there is considerable potential to create BDUs with landscaping. For example, current landscaping proposals for the NZT site would suggest that the number of BDUs that would be lost on that site could be more or less compensated for by the landscaping proposals associated with that development.

The Biodiversity Strategy will be updated periodically to reflect the current situation, prior to approval of reserved matters relating to the layout, to reflect the current situation in terms of new and enhanced biodiversity to be created on site and for the provision of ex-situ viable compensatory habitat where biodiversity cannot be fully mitigated or compensated for on site.

8. Conclusion

The requirement for compensatory habitat in terms of the total number of BDUs currently stands at **1334.35**. This figure assumes that all habitats within all red line boundaries of developments will be lost, so the figure will reduce if this proves not to be the case.

The potential to create a total of **349.58** BDUs on site has been identified. This assumes that no landscaping or habitat creation will occur on any development plots. Clearly some landscaping will occur across Teesworks therefore this figure will increase and potentially increased very significantly.

The potential to create a total of **1582.71** BDUs ex-situ has been identified. There is the option of approaching other landowners who have expressed an interest in using part of their land for compensatory habitat, should some of those options not prove viable.

In total there is the potential to create **1932.29** BDUs, which is well in excess of the 1334.34 BDUs which are predicted to be lost, thereby demonstrating the feasibility of providing sufficient compensatory habitat.

Options to compensate for the loss of particular, high value habitats have been identified for each of the habitats in question, thereby demonstrating the feasibility of providing suitable compensatory habitats.

The loss of River Units has been reassessed as being **20** rather than the 24 that were previously estimated. It is feasible to compensate for the loss of River Units on site however the viability of this will not be known until the drainage strategy is finalised. Options to create River Units ex-situ are being explored and one has so far been identified.

Options to compensate for the loss of particular species, which have significant populations on Teesworks, have been identified for each of those species. It is acknowledged that there is some uncertainty in this assessment of outcomes when dealing with species. Nevertheless, it is considered feasible that something of the order of a similar population to that which is predicted to be lost can be compensated for, for each species or species group.

Appendix 1. On site opportunity site maps

Appendix 2 Offsite Opportunities

Site No	**Area (Ha)**	**Existing habitat**	**New habitat**	**Current BDUs**	**Enhanced BDUs**	**Uplift**	**BDUs/ha**
1	26	Ruderal/ephemeral (fairly poor)	Ruderal/ Ephemeral (good)	85.8	137.46	51.66	1.99
3	2.5	Ruderal/ephemeral (fairly poor)	Ruderal/ Ephemeral (good)	8.25	13.22	4.97	1.99
4	0.3	Other neutral grassland (poor)	Intertidal saltmarsh (moderate)	1.2	0.92	-0.28	-0.93
5	0.6	Other neutral grassland (poor)	OMH (fairly good)	2.4	5.17	2.77	4.62
6	0.7	Mixed Scrub (poor)	OMH (fairly good)	2.8	6.03	3.23	4.61
7	0.5	Other neutral grassland (poor)	OMH (fairly good)	2	4.31	2.31	4.62
8	0.5	unvegetated unsealed	OMH (fairly good)	0	4.31	4.31	8.62
9	2	Urban -bare ground (bare soil)	1 ha Reedbed (f. good); 1 ha OMH (f. good)	4	15.82	11.82	5.91
11	1.5	OMH (moderate)	OMH (good)	19.8	25.55	5.75	3.83
12	4.2	Reedbed (moderate)	Reedbed (good)	55.4	68.45	13.05	3.11
13	5.9	Reedbed (fairly poor)	Reedbed (fairly good)	58.41	76.68	18.27	3.10
14	5.6	Other neutral grassland (fairly poor)	Other neutral grassland (good)	33.6	55.09	21.49	3.84
15	5.3	Other broadleaved woodland (moderate)	Other broad leaved woodland (fairly good)	42.4	47.37	4.97	0.94
16	8	Modified grassland (poor)	Other neutral grassland (good)	16	61.88	45.88	5.74
17	1	Other neutral grassland (fairly poor)	Other neutral grassland (good)	6	9.84	3.84	3.84
18	2	Other neutral grassland (fairly poor)	Other neutral grassland (good)	12	19.67	7.67	3.84
19	1	Vacant/derelict/bare ground	OMH (fairly good)	3	8.61	5.61	5.61
20	1	Felled Woodland (poor)	Mixed scrub (good)	4.4	10.29	5.89	5.89
21	1	Other neutral grassland (fairly poor)	Other neutral grassland (good)	6	9.84	3.84	3.84
22	5	Other neutral grassland (poor)	Other neutral grassland (good)	20	40.06	20.06	4.01
23	5	Other neutral grassland (poor)	Other neutral grassland (good)	20	40.06	20.06	4.01
24	4	Other neutral grassland (fairly poor)	Other neutral grassland (good)	24	39.35	15.35	3.84
25	1	Other neutral grassland (poor)	Other neutral grassland (good)	4	8.01	4.01	4.01
26	7.5	Other woodland broadleaved (moderate)	Other woodland broadleaved (fairly good)	66	73.74	7.74	1.03
27	30	Other woodland broadleaved (fairly poor)	Other woodland broadleaved (moderate)	198	223.91	25.91	0.86

Site No	Area (Ha)	Existing habitat	New habitat	Current BDUs	Enhanced BDUs	Uplift	BDUs/ha
28	2.5	Urban - amenity grassland (poor)	Other neutral grassland (good)	5	19.34	14.34	5.74
29	1.5	Urban - amenity grassland (poor)	Other neutral grassland (good)	3	11.6	8.6	5.73
30	4.5	Other neutral grassland (poor)	Other neutral grassland (good)	18	36.05	18.05	4.01
31	12	Other neutral grassland (poor)	Other neutral grassland (good)	48	96.14	48.14	4.01
32	6	Other neutral grassland (poor)	Other neutral grassland (good)	24	48.07	24.07	4.01
33	7.5	Other woodland broadleaved (fairly poor)	Other woodland broadleaved (moderate)	49.5	55.97	6.47	0.86
34	16	Other neutral grassland (fairly poor)	Other neutral grassland (good)	96	118.04	22.04	1.38
35	10	Arable	Other neutral grassland (good)	20	58.01	38.01	3.80
36	8.3	Arable	Other neutral grassland (good)	16.6	48.15	31.55	3.80
37	5	Other neutral grassland (poor)	Other neutral grassland (good)	20	40.06	20.06	4.01
38	9	Other neutral grassland (poor)	Other neutral grassland (good)	36	72.1	36.1	4.01
39	2.5	Other neutral grassland (poor)	Other neutral grassland (good)	10	20.03	10.03	4.01
40	8	Other neutral grassland (poor)	Other neutral grassland (good)	32	64.09	32.09	4.01
41	22	Other neutral grassland (poor)	Other neutral grassland (good)	88	176.25	88.25	4.01
42	42	Arable	Other neutral grassland (good)	84	324.89	240.89	5.74
43	16.5	Arable	Other neutral grassland (good)	33	127.64	94.64	5.74
44	16.5	Arable	Other neutral grassland (good)	33	95.73	62.73	3.80
45	18.1	Other neutral grassland (poor)	Other neutral grassland (good)	72.4	145	72.6	4.01
46	2.3	Modified grassland (poor)	Other neutral grassland (good)	4.6	17.79	13.19	5.73
47	5.75	Arable	Other neutral grassland (good)	11.5	44.48	32.98	5.74
48	3.5	Other neutral grassland (poor)	Other neutral grassland (good)	14	28.04	14.04	4.01
49	41.5	Other neutral grassland (poor)	Other neutral grassland (good)	166	332.47	166.47	4.01
50	12	Arable	Other neutral grassland (good)	24	92.82	68.82	5.74
51	13.33	Modified grassland (poor)	Other neutral grassland (good)	26.6	102.88	76.28	5.72
52	8	Other neutral grassland (poor)	Other neutral grassland (good)	32	64.09	32.09	4.01

Site No	Area (Ha)	Existing habitat	New habitat	Current BDUs	Enhanced BDUs	Uplift	BDUs/ha
Total	**416.38**					**1582.71**	

Appendix 3 GSC Grays – summary of discussions with target landowners

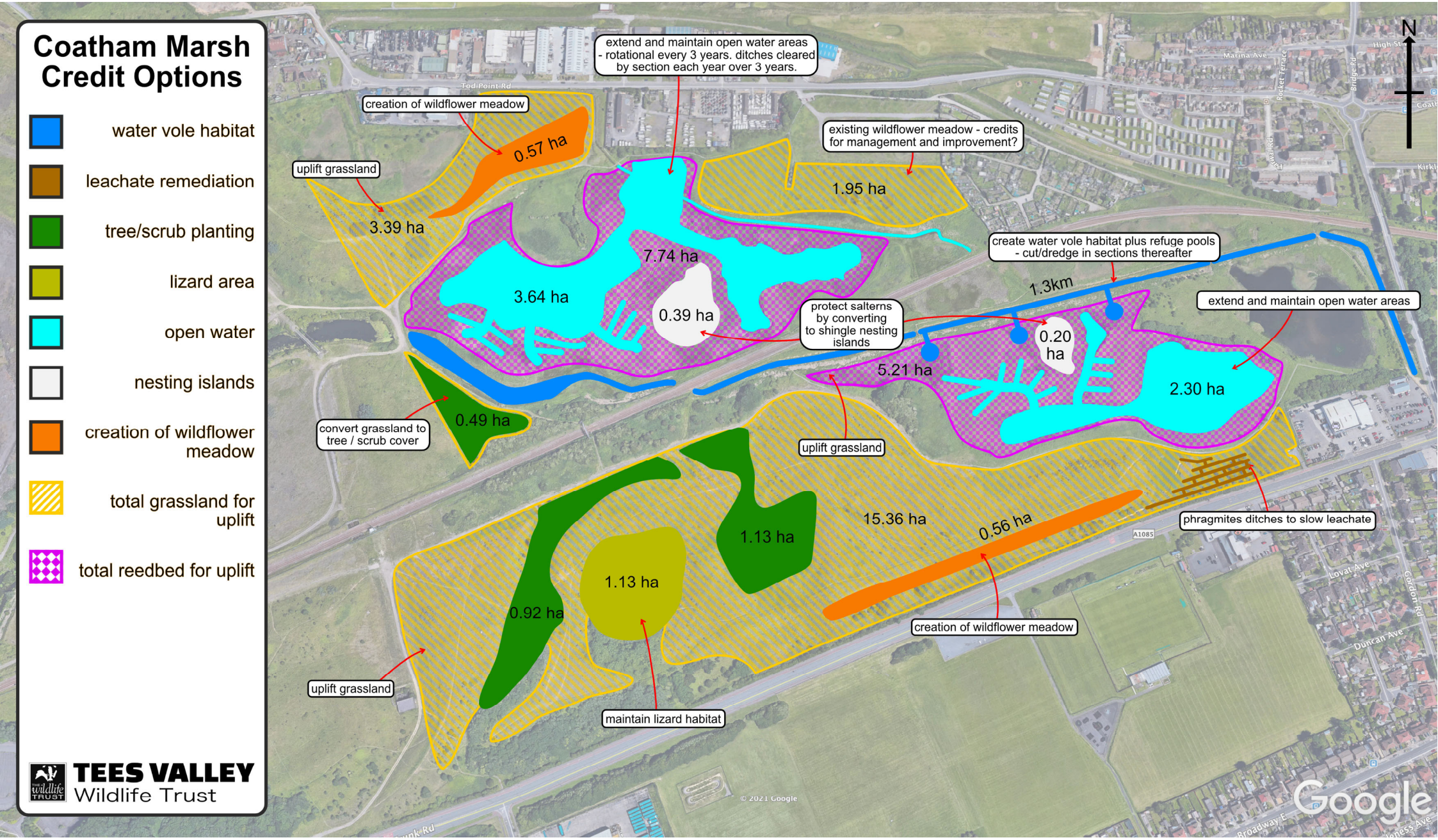
Landowner	Contacted	Tenure and possession	Designations	Third Party rights or interests (other than ROWs)	Agri-environment Scheme	Expiry Date	Potential BDU uplift (total for holding)	Notes on suitability	Queries raised
A	06/08/21	Owner Occupier; grassland is let on a grazing licence	None	None	N/A	N/A	118.74	Grassland field is ex-quarry land and current income is only from a grazing licence; Arable field is more productive/lucrative and therefore a greater financial incentive would be required (but the potential gain is also greater) for the land use to be changed.	Keen to understand how these sites compared in scale and uplift value to others on the 'shortlist'; willing to proceed if the terms and payments are attractive
B	06/08/21	Lifetime tenancy and long-term FBT	None	One site is open access and a popular walk/viewpoint	ELS/HLS scheme (there are ELS options only on the relevant land)	2023	390.68	Habitat restoration on open access land likely to be supported by landlord and the local community, but the landlord may not support a 30 year covenant; landlord is likely to have strong views on future management	Queried why additional land at [] was not on the 'shortlist'
C	09/08/21	Owner Occupier	Part of the holding is a SSSI	Some open access ground	ELS/HLS scheme	2022	98.28	Part of the holding is designated SSSI but this area has not been shortlisted by INCA	Mentioned that they may prefer to keep their options open until more details of future schemes (ie. Environmental Land Management 'ELM' schemes) are released

Landowner	Contacted	Tenure and possession	Designations	Third Party rights or interests (other than ROWs)	Agri-environment Scheme	Expiry Date	Potential BDU uplift (total for holding)	Notes on suitability	Queries raised
D	04/08/21	Owner Occupier; grassland is let on a Farm Business Tenancy (Short term)	None	Shared access to adjacent property (owner supportive of proposals); currently have an agreement with a contractor to undertake all field operations and the detail of that agreement would need to be further discussed	Mid Tier Countryside Stewardship Scheme	2025	329.14	The landowners are very keen to improve the environmental outcomes on the site (e.g. reducing fertiliser use, entering stewardship etc.) and are offering a large area; keen to gain some certainty regarding future management	Raised some concerns that a 30 year term would take them beyond their lifetime/management of the holding and therefore queried whether there would be a 'break clause' of any kind; keen to understand how their site compares to others on the 'shortlist'
E	12/08/21	Owner Occupier	None	None	Wildlife Offer Application submitted 2021	2026	177.8	The land is available and the wildlife offer scheme not yet implemented. This is good arable land therefore the payments would have to offer a significant incentive.	Queried whether the payments would be sufficient to incentivise good arable ground being entered into a long term agreement of this kind; commented that the long term nature of the agreement is a deterrent but is still willing to explore the possibility further.

Landowner	Contacted	Tenure and possession	Designations	Third Party rights or interests (other than ROWs)	Agri-environment Scheme	Expiry Date	Potential BDU uplift (total for holding)	Notes on suitability	Queries raised
F	06/08/21	AHA Tenant (Succession tenancy and has a son who would be eligible)	None	None	ELS/HLS scheme	2024	85.79	This is rough ground which would make management difficult but previous surveys suggest there could be potential for high value grassland habitat to be restored here; some issues with unauthorised access and camping; land has a serious issue of blackleg (a bacterial disease that affects cattle) and the landowners have previously indicated that because of this they would be supportive of the land being taken out of production and planted with trees	Concerns raised that the land would not be suitable for 'hay meadow restoration' as it is too rough and machinery access would be difficult/impossible; happy to proceed if the payments are right; suggested that capital funding for reinstating/relocating stockproof fences would be attractive
G	09/08/21	Owner Occupier	None	None	Mid Tier Countryside Stewardship Scheme	2022	47.6	This site was arable at the time of the baseline survey but has now been sown with a meadow flower/grass mix to compliment a tourism diversification project - planning permission has been secured for holiday lodges on part of the site; careful consideration will need to be given to questions of 'additionality' and the possibility of future	Raised concerns over the length of the commitment

Landowner	Contacted	Tenure and possession	Designations	Third Party rights or interests (other than ROWs)	Agri-environment Scheme	Expiry Date	Potential BDU uplift (total for holding)	Notes on suitability	Queries raised
								disturbance if the site expands	

Appendix 4 Coatham Marsh Enhancement Option


Coatham Marsh Credit Options
water vole habitat
leachate remediation
tree/scrub planting
lizard area
open water
nesting islands
creation of wildflower meadow
total grassland for uplift
total reedbed for uplift
TEES VALLEY Wildlife Trust
extend and maintain open water areas - rotational every 3 years. ditches cleared by section each year over 3 years.
creation of wildflower meadow
0.57 ha
uplift grassland
3.39 ha
existing wildflower meadow - credits for management and improvement?
1.95 ha
7.74 ha
3.64 ha
0.39 ha
create water vole habitat plus refuge pools - cut/dredge in sections thereafter
1.3km
protect salterns by converting to shingle nesting islands
0.20 ha
5.21 ha
extend and maintain open water areas
2.30 ha
convert grassland to tree / scrub cover
0.49 ha
uplift grassland
15.36 ha
1.13 ha
0.56 ha
phragmites ditches to slow leachate
1.13 ha
0.92 ha
creation of wildflower meadow
uplift grassland
maintain lizard habitat
N
Tod Point Rd
Matina Ave
Rocket Terrace
Bridge Rd
High St
Lovat Ave
Gordon Rd
Duncan Ave
A1085
© 2021 Google
Google

Birmingham
0121 713 1530
birmingham@lichfields.uk

Bristol
0117 403 1980
bristol@lichfields.uk

Cardiff
029 2043 5880
cardiff@lichfields.uk

Edinburgh
0131 285 0670
edinburgh@lichfields.uk

Leeds
0113 397 1397
leeds@lichfields.uk

London
020 7837 4477
london@lichfields.uk

Manchester
0161 837 6130
manchester@lichfields.uk

Newcastle
0191 261 5685
newcastle@lichfields.uk

Thames Valley
0118 334 1920
thamesvalley@lichfields.uk