Kirklees Council

TRANSFORMING CITIES FUND – HECKMONDWIKE BUS HUB

Biodiversity Net Gain Assessment

JULY 2024

PUBLIC

Kirklees Council

TRANSFORMING CITIES FUND – HECKMONDWIKE BUS HUB

Biodiversity Net Gain Assessment

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WSP

8 First Street
Manchester
M15 4RP

Phone: +44 161 200 5000

WSP.com

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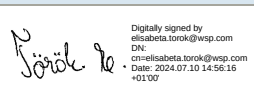
Prepared by	Poppy McDermott	Abbie Case	Payal Nandy	Payal Nandy
Signature				
Checked by	Joe Gough / Ruth Payne	Sophie Trigg	Elisabeta Torok	Elisabeta Torok
Signature				
Authorised by	Jack Fenwick / Tom Butterworth	Joe Gough	Elisabeta Torok	Elisabeta Torok
Signature				 Digitally signed by elisabeta.torok@wsp.com DN: cn=elisabeta.torok@wsp.com Date: 2024.07.10 14:56:16 +01'00'
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EXECUTIVE SUMMARY

WSP UK Ltd. (WSP) was commissioned by Kirklees Council (the client) to undertake a Biodiversity Net Gain (BNG) assessment for the redevelopment of Heckmondwike Bus Hub (the 'Proposed Development'. The Heckmondwike Bus Hub (the 'Site') is located in the county of West Yorkshire, approximately 12km southwest of Leeds.

WSP was commissioned by the client to carry out a BNG assessment of the Proposed Development and produce a report which:

- Quantifies and compares the baseline biodiversity value and the post-development biodiversity value to provide an indication of quantitative net loss, no net loss, or a net gain for biodiversity at the Site, and;
- determines whether the Proposed Development achieves a biodiversity net gain by evidencing compliance with the Principles.

WSP undertook an initial BNG assessment in July 2022 relating to a previous post-development landscape plan. This report details updated results of the BNG assessment following the redesign of the landscape plan (drawing number TCF-WSP-KHBH-XXX-DR-LE-000001 P05 dated June 2024) and subsequent production of a Landscape and Ecological Management Plan (LEMP).

BNG is the desired result of a process applied to development so that, overall, there is a positive outcome for biodiversity. The process itself follows the mitigation hierarchy, which sets out that everything possible must be done to firstly avoid, secondly minimise and thirdly compensate for unavoidable impacts on or off site. A BNG assessment comprises quantitative and qualitative components.

The quantitative component of the assessment was completed using the Natural England Small Sites Metric (SSM) version 3.1 – beta test (hereafter referred to as the 'Metric'). The Metric has been used to quantify the biodiversity value of existing habitats present on Site (**Appendix B, Figure 1**) and those proposed under the current post-development landscape design (**Appendix B, Figure 2**).

The existing Site is dominated by hardstanding, with a small area of landscaped modified grassland, and scattered trees (**Appendix B, Figure 1**). The assessed landscape design is also dominated by hardstanding, but with the inclusion of a green roof on the main bus station, a green wall, increased areas of species rich grassland planting, introduced shrub planting, the addition of five urban trees and the creation of sustainable urban drainage features (**Appendix B, Figure 2**).

To demonstrate a qualitative positive biodiversity outcome using this process, the project is assessed against the Construction Industry Research and Information Association (CIRIA), the Chartered Institute of Ecology and Environmental Management (CIEEM) and the Institute of Environmental Management and Assessment (IEMA) Biodiversity Net Gain Good Practice Principles (**Appendix A**).

The qualitative assessment indicated that the Proposed Development would result in a net gain in Area-based Habitat Units (ABHU) of **54.42%.** No Hedgerow Biodiversity Units (HBU) or River Biodiversity Units (RBU) were present within either the baseline or the post-development. Full results are shown in **Table 1-1** below.

Table 1-1 - Biodiversity Small Sites Metric calculation results

Biodiversity Units	Baseline Value	Post-development Value	Change in Units	Quantitative Outcome
Area-based Habitat Units (AHBU)	0.1783	0.2754	0.0970*	**54.42%**
Hedgerow Biodiversity Units (HBU)	N/A	N/A	N/A	**N/A**
River Biodiversity Units (RBU)	N/A	N/A	N/A	**N/A**

**The total shown is in line with the Metric where totals are rounded up or down based on the decimal values*

In addition, the Proposed Development as assessed achieves a qualitative BNG as it evidences compliance with all ten of the Good Practice Principles.

1 INTRODUCTION

1.1 PROJECT BACKGROUND

1.1.1. WSP UK Ltd. (WSP) was commissioned by Kirklees Council (the client) to undertake an updated Biodiversity Net Gain (BNG) assessment for the redevelopment of Heckmondwike Bus Hub, the 'Site', located in the county of West Yorkshire at grid reference SE 21524 23532. The Site is bordered to the southwest by the B6117, the south by the A638, the east by Royle Fold Road and the north by George Street. The Site is surrounded by commercial and residential urban development, as well as Green Park to the west.

1.1.2. The Transforming Cities Fund (TCF) comprises a £317m programme of investment that aims to deliver a transformational programme of new infrastructure and help create a step change in travel across the Leeds City Region (LCR). The West Yorkshire Combined Authority's TCF Vision is: "*to support delivery of inclusive growth across the Leeds City Region, through an innovative and coordinated walking, cycling and bus package, which provides genuine sustainable and healthy travel options for our communities along our corridors of greatest economic need, and transforms accessibility from new development sites and accommodates growth at key public transport hubs*."

1.1.3. The Heckmondwike Bus Hub Scheme (the 'Proposed Development') would reconfigure the existing bus station and provide new facilities to encourage sustainable transport measures. The Proposed Development comprises a new 'fit for purpose' bus station at Heckmondwike to provide increased capacity for bus services, improved interchange opportunities, improved waiting environment, and improved access to information. The Proposed Development would comprise the following:

- A new covered concourse with new bus stands, seating and real time information boards;
- Five new Drive-in-Reverse-Out (DIRO) bus stands, one Drive-in-Drive-Out (DIDO) layover stand and one layover resting bus bay located off the carriageway on a new hard landscaped bus apron, replacing the existing 4 No. bus layover bays to increase bus capacity;
- A new fully enclosed waiting area with an Accessible WC and Changing Places facility. This will also provide enclosed staff office space, rest areas, and plant rooms;
- A harmonious modern building design that integrates well into the surrounding heritage assets and public realm but also provides a unique design identity;
- Enhanced soft and hard landscaping to create a more inviting and usable public realm that also promotes art, culture, and biodiversity;
- New reversing camera facilities to allow for safe bus reversing activity so the drivers can view what's behind them at bus stands 1 to 5;
- An environmentally friendly bus station design which will incorporate energy efficiency, local energy generation such as roof-mounted solar photovoltaic (PV) panels, and green features that complements the surrounding heritage and public realm;
- 4 No. cycle stands (accommodating 8 No. cycles);
- Bin store; and
- Improved pedestrian circulation routes around the bus station site.

1.2 BIODIVERSITY NET GAIN

1.2.1. BNG is the end result of a process applied to development so that overall, there is a positive outcome for biodiversity. The process itself follows the mitigation hierarchy, which sets out that everything possible must be done to firstly avoid, secondly minimise and thirdly restore/rehabilitate losses of biodiversity on-site. Only as a last resort, residual losses are compensated for using biodiversity offsets, which are distinguished from other forms of mitigation in that they are off the development site. BNG assessment reports are intended to provide a detailed insight into the adherence of a Proposed Development to the BNG Good Practice Principles (**Appendix A**).

1.2.2. The purpose of this document is to provide an updated BNG assessment of the post-development landscape plan in light of the revisions made.

1.2.3. The benefit of undertaking a BNG assessment at this stage in the planning process is that results can be used to:

- Inform the ongoing design of ecological and landscape mitigation;
- Identify whether the current Proposed Development design will likely achieve a net gain, net loss, or no net loss for biodiversity; and,
- Demonstrate policy compliance in support of any decision-making.

1.2.4. A net gain target of 10% is to become a mandatory requirement from January 2024. In the absence of mandatory net gain, a target of 10% in line with the Environmental Act (HSMO, 2021), is generally recommended as best practice. However, a lower percentage is currently policy compliant with the National Planning Policy Framework (NPPF, 2023) and Policy LP30 of the Kirklees Local Plan (adopted February 2019) where development proposals are required to *"provide net biodiversity gains through good design by incorporating biodiversity enhancements and habitat creation where opportunities exist".*

1.2.5. Adopting a BNG approach can account for biodiversity losses which were previously not fully assessed and mitigated for, via legal and planning systems. Whilst some species are extensively protected, many are not; with the consequence that development can be 'legally compliant' but still result in biodiversity loss. The BNG approach guards against this, enabling development to contribute towards the national and global biodiversity targets and towards local and national strategies for conserving and enhancing wildlife. BNG assessments allow stakeholders to demonstrate adherence to national legislation and local policy concerning biodiversity.

1.2.6. This assessment (including the updated versions) has been completed by ecologists competent in BNG, who are Members of Chartered Institute of Ecology and Environmental Management (CIEEM).

1.3 RELEVANT LEGISLATION AND POLICY

1.3.1. This BNG assessment has been compiled with reference to the following relevant nature conservation legislation, planning policy and the UK Biodiversity Framework from which the protection of sites, habitats and species is derived in England. Details of the legislation, policy and strategic documents relevant to the Proposed Development are provided in **Appendix C**, and are listed below:

- Environment Act 2021;

- UK Government's 25 Year Environmental Plan;
- Biodiversity 2020: A Strategy for England's Wildlife and Ecosystem Services;
- National Planning Policy Framework (2023);
- The Natural Environment and Rural Communities Act; and
- The Kirklees Local Plan 2019.

2 METHODS

2.1 ASSESSMENT METHODOLOGY

2.1.1. A summary of the BNG assessment methodology and details of project-specific data sources, assessment limitations and assumptions are provided in the following section.

2.2 DATA SOURCES

2.2.1. The BNG assessment has been informed by the following data sources:

- A walkover survey was undertaken in February 2021 as part of an Ecological Constraints Assessment of the Site (WSP, 2021). The survey used the Joint Nature Conservation Committee (JNCC) Phase 1 habitat techniques and covered the entire Site including boundary features. The survey provided a baseline habitat database which details the habitat types present on Site and provided target notes on specific features of ecological interest (e.g., a pond) or habitat features too small to be mapped. Phase 1 habitats were then translated into UK Habitat (UKHab) Classification (UKHab, 2018) habitat types. Habitats were translated using the translation tool provided in the Natural England Biodiversity Metric 3.1 – Auditing and accounting for biodiversity (Natural England, 2022b).
- A retrospective condition assessment of habitats was undertaken in June 2022 by an experienced ecologist following review of the walkover survey, site photographs and aerial photography, where required. The condition assessment was undertaken in accordance with the Natural England Small Sites Metric (SSM) version 3.1 – beta test (hereafter referred to as the 'Metric') (Natural England, 2022a).
- An updated post-development landscape design (the 'landscape plan') (drawing number TCF-WSP-KHBH-XXX-DR-LE-000001 P05) dated June 2024. The post-development landscape habitats were translated into UK Habitat (UKHab) Classification (UKHab, 2018) habitat types for use in the assessment by a suitably experienced ecologist. Habitat types used in this BNG assessment are detailed in **Appendix E**.
- The Arboricultural Impact Assessment Report (WSP, 2022). This included a walkover survey undertaken in June 2021 to assess the baseline arboricultural impacts from the Proposed Development.
- In November 2023, after discussions with the Client, variations to the design of the Proposed Development were incorporated into this updated BNG assessment. These changes involved the removal of a small green roof over the bin store.
- In June and July 2024 further updates were applied to the landscape proposals which included the reduction in size and relocation of sections of the green wall, relocation of one section of the rain garden and reduction of species rich grassland habitat.

2.3 BNG ASSESSMENT

2.3.1. This BNG assessment used the following industry recognised best practice methodologies:

- Natural England (2022a). Small Sites Metric. Calculation Tool User Guide – Beta test. Net Gain: Good Practice Principles for Development. A Practical Guide.

2.3.2. The criteria required for using the SSM are as follows (Natural England, 2022a):

"The SSM can only be used when both of these criteria are met:

1) The development is either;

a) A residential development: where the number of dwellings to be provided is between one and nine inclusive on a site having an area of less than one hectare

b) Where the number of dwellings to be provided is not known, there is a site area of less than 0.5 hectares

c) For all other development types where the site area is less than 0.5 hectares or 5000 square metres.

2) *There is no priority habitat, within the development area (excluding hedgerows and arable margins)*"

2.3.3. The project is understood to meet criteria 1(c) and 2 for use of the SSM.

2.3.4. BNG assessment calculations are separated into four key sections, which are used to produce the quantitative outcomes of the assessment. These are:

1. Separating out irreplaceable baseline habitats and any mitigation proposed for impacts to irreplaceable habitats from the main dataset;
2. Quantification of baseline biodiversity units using UKHab habitat data and habitat condition assessment data;
3. Quantification of post-development biodiversity units using UKHab habitat data translated from the post-development landscape design; and
4. Assessing the net change in biodiversity value as a result of the Proposed Development.

2.3.5. Collectively these elements of the BNG assessment are used in conjunction with qualitative information relating to the BNG Good Practice Principles (CIEEM, CIRIA & IEMA, 2019) to produce a scheme wide BNG assessment outcome. Further detail can be found on the Natural England website (Natural England, 2022b).

2.3.6. It is important to recognise that the quantification of biodiversity is one of several factors to be considered when assessing the impact of the Proposed Development on biodiversity.

2.4 UKHAB HABITATS

2.4.1. JNCC Phase 1 habitat types determined in the walkover survey were translated to UKHab habitat types using the habitat translation information provided in the Metric and can be seen below in **Table 2-1**. The UKHab classifications will be referred to instead of the Phase 1 descriptions throughout this report. Habitat translations and condition assessment information are provided within **Appendix E**.

Table 2-1 - UKHab classifications present on Site (baseline)

Phase 1 Habitat type	UKHab type
J5- Other habitats	Urban - Developed Land; sealed surface
J2- Amenity grassland	Grassland- Modified grassland
A3.1 – Broadleaved Scattered Trees	Urban - Urban tree

2.5 LIMITATIONS AND ASSUMPTIONS

2.5.1. The following assumptions and limitations were applied when using the above methodologies. None of the limitations were considered to be significant or have a material effect on the assessment.

ASSUMPTIONS ABOUT BASELINE HABITATS

- The number, size, condition, and location of trees on site has been assumed based on the data provided from the Arboricultural Impact Assessment Report (WSP, 2021). The data provided groups of trees in the South of the Site, rather than giving a total number of trees on Site. Therefore, assumptions have been made based on the 'Tree Removal and Protection Plan' shown in the Arboricultural Impact Assessment Report (WSP, 2021) of the number of trees found on-site.
- An amendment to the red line boundary during the pre-application stage meant the addition of a small area of land to the southeast of the Site. Due to the fact that the survey visit was undertaken in 2022, before the amendment was made, the habitats in this area were not subject to survey. As such, habitats for this additional area have been assessed using aerial imagery only and may not be fully representative of the habitats on Site. Assessment using aerial imagery identified the additional area as developed land; sealed surface and is not considered to have impacted the assessment.

ASSUMPTIONS ABOUT POST DEVELOPMENT PROPOSALS

- Following advice from Natural England, the Natural England SSM Version 1.1 was used in calculating both the baseline and post-development habitat units. "*Due to the changes that are made for each version of the biodiversity metric based on reviews and feedback, the values produced by them are not comparable (see Rule 2 in the User Guide), and we advise that new projects use the latest version of the metric, while pre-existing projects can continue to use the metric they started with.".* The first issue of this BNG assessment (WSP, 2022) was prepared using the Natural England SSM Version 1.1, and therefore the same metric has been implemented for this updated assessment.
- Trees to be planted on site were assumed small' (≤ 30cm), in accordance with Natural England, BM 3:1: Auditing and accounting for biodiversity (Natural England, 2022b) – User Guide Chapter

7, due to the constraints imposed by the location of these trees within the Proposed Development.

- Sustainable urban Drainage systems (SuDs) detailed in the Landscape Plan have been translated into the UKHab habitat ‘rain gardens’ and are hereafter referred to as rain gardens in this report.

3 RESULTS

3.1 BASELINE BIODIVERSITY

3.1.1. The biodiversity baseline for the Site is based on habitat types and areas, their distinctiveness and condition scores, and the number of biodiversity units generated by each type of habitat (detailed in **Appendix D**). The baseline biodiversity map showing the habitats within the Site is included in **Appendix B, Figure 1**.

3.1.2. Full details of the habitat types and habitat conditions translated from Phase 1 habitat data are detailed in **Appendix E**.

3.1.3. There were no irreplaceable habitats or statutory designated sites within the Site and, therefore these are not discussed further within this report. In addition, no hedgerow, tree lines or watercourses were present within the Site.

3.1.4. Baseline biodiversity can be summarised as follows:

- Existing area-based habitats total 3572m^2 and generated 0.1783 Area-based Habitat Units (AHBU).
- Habitats consisted mostly of Developed land; sealed surface, with areas of modified grassland of a moderate condition. A total of eleven individual trees were present, all classed as small size.

3.2 POST-DEVELOPMENT BIODIVERSITY

3.2.1. The post-development on Site after construction is based on habitats presented on the landscape plan. Post-development habitats and the units generated are detailed in **Appendix D**. The post-development biodiversity map showing the habitats within the Site following construction is included in **Appendix B, Figure 2**.

3.2.2. Created habitats, as shown in the landscape plan were translated into the relevant habitat type to be used in BNG calculations. These along with the relevant assumptions for each created habitat type are shown in **Table 3-1** below.

3.2.3. Post-development biodiversity can be summarised as follows:

- Large areas of existing hardstanding are likely retained.
- Created area-based habitats would total 1644m^2 and generate a total of 0.2754 AHBU
- Post-development habitats comprise of Developed land; sealed surface (0 ABHU), Modified grassland (0.0306 ABHU), Other neutral grassland (0.1609 ABHU), Introduced Shrub (0.0010 ABHU), Urban Trees (0.0069 ABHU), Other green roof (0.0565 ABHU), Facade-bound green wall (0.0005 ABHU), Rain Gardens (0.0189 ABHU).

Table 3-1 – Created Post-Development Habitats

Habitat type	Area (ha)	Assigned habitat within the Metric	Area Based Habitat Units (ABHU)	Assumptions
Verge cut into wildflower meadow	0.088	Modified grassland	0.0306	Modified grassland assumed in moderate condition. Habitat type and condition is based on the species list and management practices detailed in the LEMP as well as the surrounding urban environment. Assumed area/compensation not identified in local strategy.
Neutral Grassland/ Wildflower Meadow	0.240	Other neutral grassland	0.1609	Other neutral grassland assumed in moderate condition. Habitat type and condition is based on the species list in combination with management to maintain the meadow in a moderate condition. Consideration has also been given to the influence of the surrounding urban environment. Assumed area/compensation not identified in local strategy.
Extensive Green Roof	0.157	Other green roof	0.0565	Based on condition sheets within metric and UKHab guidance, the condition for green roof is auto-assigned 'N/A'. To avoid a calculation error, the SSM requires a condition to be inputted for the green roof. Therefore as a precaution, a moderate condition has been assigned. Assumed area/compensation not identified in local strategy.

Habitat type	Area (ha)	Assigned habitat within the Metric	Area Based Habitat Units (ABHU)	Assumptions
Green Wall	0.0002	Façade-bound green wall	0.0005	Green wall assumed in moderate condition. Assumed area/compensation not identified in local strategy.
Ornamental Shrub	0.0005	Introduced shrub	0.010	Introduced shrub assumed in poor condition, typical of a Public Open Space (POS) setting. Assumed area/compensation not identified in local strategy.
Rain Gardens	0.0052	Rain garden	0.0189	Rain garden assumed in moderate condition. Assumed area/compensation not identified in local strategy.
Proposed tree (5)	0.0023	Urban tree	0.069	Urban trees assumed in moderate condition. Assumed area/compensation not identified in local strategy. Assumed small' (≤ 30cm), in accordance with Natural England, BM 3:01 Auditing and accounting for biodiversity – BM 3:1: Auditing and accounting for biodiversity (Natural England, 2022b) – User Guide Chapter 7, due to the constraints imposed by the location of these trees within the Proposed Development.
Hardscape and Street Furniture	0.1098	Developed land; sealed surface	0	N/A

3.3 SUMMARY OF OVERALL BIODIVERSITY CHANGE

3.3.1. **Table 3-2** summarises the overall biodiversity change from the baseline and post-development landscape design. The full results are shown within the Metric (**Appendix D**).

3.3.2. The Proposed Development as assessed would result in an **+54.42%** net gain in biodiversity of area-based habitats. No river or hedgerow units were present on-site pre-development or post development. trading rules within the toolkit are satisfied, as habitats have been replaced like for like, or better.

Table 3-2 – Summary of Results

Biodiversity Unit Type	Baseline	Post-development	Change	Percentage Outcome
Area-based Habitat Units (AHBU)	0.1783	0.2754	0.0970*	**+54.42%**
Hedgerow Units	N/A	N/A	N/A	N/A
River Units	N/A	N/A	N/A	N/A

**The total shown is in line with the Metric where totals are rounded up or down based on the decimal values*

3.4 BIODIVERSITY NET GAIN PRINCIPLES

3.4.1. **Table 3-3** discusses adherence of the Proposed Development to each of the BNG Good Practice Principles to determine if wider biodiversity net gain obligations (i.e., in addition to the measurable net gain) have been met.

Table 3-3 - Evidence of Project Compliance with BNG Good Practice Principles

Principle	Description	Evidence	Current Outcome
1. Apply the mitigation hierarchy	Do everything possible to first avoid and then minimise impacts on biodiversity. Only as a last resort, and in agreement with external decision-makers where possible, compensate for losses that cannot be avoided. If compensating for losses within the development footprint is not possible or does not generate the most benefits for nature conservation, then offset biodiversity losses by gains elsewhere.	The Proposed Development would result in a considerable increase in habitat diversity on-Site, considering the Site's urban location and lack of biodiversity currently present (dominated by hard standing). The proposed landscape design uses green infrastructure features such as a green roof and a green wall. In addition, the creation of grassland patches with increased species diversity also demonstrates how the Proposed Development has considered benefits to nature. The baseline habitats lost within the Site were of Low distinctiveness.	Achieved

Principle	Description	Evidence	Current Outcome
		This habitat loss is not possible to avoid and in the context of what is to be created on-site, will have little impact on biodiversity. The landscape design for the Proposed Development intends to compensate for habitat loss of modified grassland and a number of trees on-site by creating new, biologically valuable habitats. This would be achieved by adhering to the monitoring techniques set out in the proposed Landscape and Ecological Management Plan (LEMP) and Biodiversity Enhancement Management Plan (BEMP).	
2. Avoid losing biodiversity that cannot be offset by gains elsewhere	Avoid impacts on irreplaceable biodiversity – these impacts cannot be offset to achieve No Net Loss or Net Gain.	No irreplaceable habitats would be impacted by the Proposed Development.	Achieved
3. Be inclusive and equitable	Engage stakeholders early, and involve them in designing, implementing, monitoring and evaluating the approach to Net Gain. Achieve Net Gain in partnership with stakeholders where possible and share the benefits fairly among stakeholders.	The BNG outcome is to be shared with relevant stakeholders through the planning process. Engagement with stakeholders has been undertaken and will continue as the Proposed Development progresses.	Achieved
4. Address risks	Mitigate difficulty, uncertainty and other risks to achieving Net Gain. Apply well-accepted ways to add contingency when calculating biodiversity losses and gains in order to account for any remaining risks, as well as to compensate for the time between the losses occurring and the gains being fully realised.	The BNG assessment used industry recognised risk multipliers from the Metric. These multipliers account for uncertainty with creating new habitats. Contingency is added according to the level and type of uncertainty, to increase the amount of habitat needed to achieve no net loss or net gains in biodiversity. Details outlined within the LEMP and creation and implementation of a BEMP would further reduce the risk for delivery of the proposed habitats.	Achieved

Principle	Description	Evidence	Current Outcome
5. Make a measurable Net Gain contribution	Achieve a measurable, overall gain for biodiversity and the services ecosystems provide while directly contributing towards nature conservation priorities.	The BNG assessment has identified that, as assessed, the Proposed Development achieves a 54.42% net gain for biodiversity in relation to area-based habitats. The assessment has identified that the Proposed Development achieves a 0.00% net gain in hedgerow and river habitats (linear habitats) as these are not present on Site either pre- or post-development. Overall, the Proposed Development would provide and increase ecosystem services on-site and in the immediate area. The creation of a green roof, green walls, other neutral grassland planting and planting trees will encourage species diversity to an area which is relatively urbanised. This overall inclusion of green spaces and habitat diversity in an urban development would help in meeting national government nature targets included in the Environment Act 2021.	Achieved
6. Achieve the best outcomes for biodiversity	Achieve the best outcomes for biodiversity by using robust, credible evidence and local knowledge to make clearly justified choices when: • Delivering compensation that is ecologically equivalent in type, amount and condition, and that accounts for the location and timing of biodiversity losses; • Compensating for losses of one type of biodiversity by providing a different type that delivers greater benefits for nature conservation; • Achieving Net Gain locally to the development while also	This BNG assessment used the most recent data and followed a rigorous method and quality assurance process. Habitats have been proposed which would deliver greater benefits for nature conservation. These include a green roof, green wall, grassland of better condition and rain gardens. The proposed BEMP will detail management requirements aimed at achieving the required conditions of post-development habitats to ensure a net gain in biodiversity as a result of the Proposed Development.	Achieved

Principle	Description	Evidence	Current Outcome
	contributing towards nature conservation priorities at local, regional and national levels; • Enhancing existing or creating new habitat; and • Enhancing ecological connectivity by creating more, bigger, better and joined areas for biodiversity.		
7. Be additional	Achieve nature conservation outcomes that demonstrably exceed existing obligations (i.e. do not deliver something that would occur anyway).	The habitats created at the Site would not be delivered through any other existing project or obligation, and as such the result is additional.	Achieved
8. Create a Net Gain legacy	Ensure Net Gain generates long-term benefits by: • Engaging stakeholders and jointly agreeing practical solutions that secure Net Gain in perpetuity; • Planning for adaptive management and securing dedicated funding for long-term management; • Designing Net Gain for biodiversity to be resilient to external factors, especially climate change; • Mitigating risks from other land uses; • Avoiding displacing harmful activities from one location to another; and • Supporting local-level management of Net Gain activities.	Benefits would be secured through the following processes: • *Stakeholders* – to be engaged and decisions agreed through the planning process. • *Management and Resilience* –a LEMP has been produced detailing how the habitats should be created, maintained and managed. A BEMP has also been produced, detailing how to achieve the required condition of habitats set out in the Metric for overall biodiversity benefits. The BEMP details how habitats should be managed over a 30-year period for the maintenance of the required habitat condition. • *Displacement of other land uses and harmful activities* – Management through adhering to the LEMP (see above) would ensure this is guarded against. • *Local-level management* – As above, this will be achieved through adhering to the LEMP and BEMP.	Achieved

Principle	Description	Evidence	Current Outcome
9. Optimise sustainability	Prioritise Biodiversity Net Gain and, where possible, optimise the wider environmental benefits for a sustainable society and economy.	This BNG assessment is being used to inform the Proposed Development's design to provide the best possible outcome for biodiversity. The aesthetic value of the area surrounding the Proposed Development would be improved through the delivery of the landscape plan. The plan has the potential to provide urban cooling and air quality improvement from the planted trees and green roof and pollinator increase from the semi-natural, landscaped habitats.	Achieved
10. Be transparent	Communicate all Net Gain activities in a transparent and timely manner, sharing the learning with all stakeholders.	The full BNG outcome and documentation will be shared with relevant stakeholders through the delivery of the Proposed Development.	Achieved

4 CONCLUSIONS AND RECOMMENDATIONS

4.1.1. The Proposed Development would result in a quantitative net gain in ABHU (+54.42%). No Hedgerow Biodiversity Units (HBU) or River Biodiversity Units (RBU) were present within either the baseline or the post-development.

4.1.2. In addition, the Proposed Development as assessed has complied with all trading standard rules proposed in the Metric and as a result, the Metric notes ‘All Key Rules Satisfied’. The Proposed Development has evidenced compliance with all ten of the Good Practice Principles.

4.1.3. Should any amendments be incorporated into the landscape plan, an updated BNG assessment would be required in order to generate accurate results for the final Proposed Development.

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Appendix A

CIEEM, CIRIA AND IEMA GOOD PRACTICE PRINCIPLES

Biodiversity Net Gain

Good practice principles for development

Biodiversity Net Gain is development that leaves biodiversity in a better state than before. It is also an approach where developers work with local governments, wildlife groups, land owners and other stakeholders in order to support their priorities for nature conservation. These ten principles set out good practice for achieving Biodiversity Net Gain and must be applied all together, as one approach.

Principle 1. Apply the Mitigation Hierarchy

Do everything possible to first avoid and then minimise impacts on biodiversity. Only as a last resort, and in agreement with external decision-makers where possible, compensate for losses that cannot be avoided. If compensating for losses within the development footprint is not possible or does not generate the most benefits for nature conservation, then offset biodiversity losses by gains elsewhere.

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

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

Principle 3. Be inclusive and equitable

Engage stakeholders early, and involve them in designing, implementing, monitoring and evaluating the approach to Net Gain. Achieve Net Gain in partnership with stakeholders where possible, and share the benefits fairly among stakeholders.

Principle 4. Address risks

Mitigate difficulty, uncertainty and other risks to achieving Net Gain. Apply well-accepted ways to add contingency when calculating biodiversity losses and gains in order to account for any remaining risks, as well as to compensate for the time between the losses occurring and the gains being fully realised.

Principle 5. Make a measurable Net Gain contribution

Achieve a measurable, overall gain[1] for biodiversity and the services ecosystems provide while directly contributing towards nature conservation priorities.

1 Net Gain has been described as a measurable target for development projects where impacts on biodiversity are outweighed by a clear mitigation hierarchy approach to first avoid and then minimise impacts, including through restoration and / or compensation. Adhering to these Net Gain principles (i.e. pursuing all principles together) will help in under-pinning good practice for achieving and sustaining Net Gain.

Principle 6. Achieve the best outcomes for biodiversity

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

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

Principle 7. Be additional

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

Principle 8. Create a Net Gain legacy

Ensure Net Gain generates long-term benefits by:

- Engaging stakeholders and jointly agreeing practical solutions that secure Net Gain in perpetuity[2]
- Planning for adaptive management and securing dedicated funding for long-term management
- Designing Net Gain for biodiversity to be resilient to external factors, especially climate change
- Mitigating risks from other land uses
- Avoiding displacing harmful activities from one location to another
- Supporting local-level management of Net Gain activities

Principle 9. Optimise sustainability

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

Principle 10. Be transparent

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

2 Biodiversity compensation should be planned for a sustained Net Gain over the longest possible timeframe. For development in the UK, the expectation is that compensation sites will be secured for at least the lifetime of the development (e.g. often 25-30 years) with the objective of Net Gain management continuing in the future.

Appendix B

BASELINE AND POST-DEVELOPMENT LANDSCAPE MAPS

Legend

- Red Line Boundary

UKHab Habitat Types

- g4 - modified grassland
- u1b - developed land, sealed surface
- Individual trees

wsp

Client: Kirklees Council

Project: Transforming Cities Fund – Heckmondwike Bus Hub

Title: Figure 1 - Baseline UKHab Map

Drawing No:	Figure 1	Drawn:	PN
Date:	12/14/2023	Checked:	AC
Scale:	500 @ A3	Approved:	JG

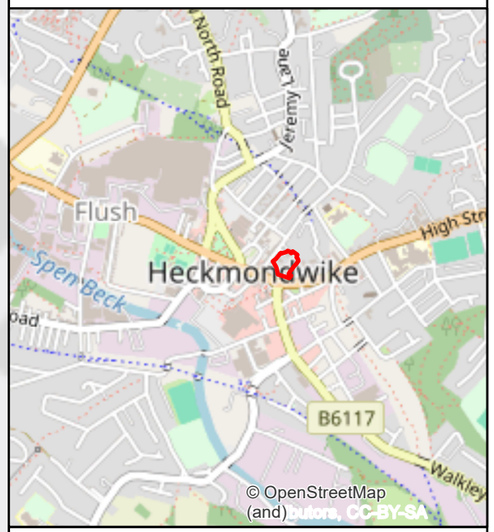
N

Legend

Red Line Boundary

UKHab Code

- g3c - other neutral grassland
- g4 - modified grassland
- u1120 - green wall
- u1160 - introduced shrub
- u1190 SuDs / Rain Garden
- u1b - developed land, sealed surface
- u 1110 - green roof
- Proposed Trees



wsp

Client: Kirklees Council

Project: Transforming Cities Fund – Heckmondwike Bus Hub

Title: Figure 2 - Post-Development UKHab Map

Drawing No:	Figure 2	Drawn:	PN
Date:	7/10/2024	Checked:	AC
Scale:	600 @ A3	Approved:	JG

Appendix C

BIODIVERSITY NET GAIN POLICY AND LEGISLATION

BIODIVERSITY NET GAIN POLICY AND LEGISLATION

NATIONAL LEGISLATION

THE ENVIRONMENT ACT 2021

The Environment Act 2021 is a framework to protect and improve the natural environment, under the oversight of the Office for Environmental Protection. Schedule 14 of this Act includes a mandatory requirement for all developments that require planning permission to achieve a 10% net gain in biodiversity. Enhancements must be maintained for a minimum of 30 years upon completion of the development. However, a two-year transition period was set out in the consultation documents and so it is not anticipated that the 10% biodiversity net gain requirement will be legally mandatory until 2024.

UK GOVERNMENT'S 25 YEAR ENVIRONMENT PLAN

The UK Government's 25 Year Environment Plan (DEFRA, 2018) states a desire to '*embed a 'net environmental gain' principle for development to deliver environmental improvements locally and nationally*' and plans to consult on making Biodiversity Net Gain a mandatory requirement.

On 14th March 2019, Her Majesty's Treasury confirmed that following consultation, the government will use the forthcoming Environment Bill to mandate BNG for development in England, ensuring that the delivery of much-needed infrastructure and housing is not at the expense of vital biodiversity.

BIODIVERSITY 2020: A STRATEGY FOR ENGLAND'S WILDLIFE AND ECOSYSTEM SERVICES

Biodiversity 2020: A strategy for England's wildlife and ecosystem services (DEFRA, 2011) is the national strategy for biodiversity. This sets out an ambition to halt the loss of biodiversity and see an increase in the area of priority habitats by 200,000 ha by 2020. Biodiversity 2020 sets in policy the objectives to improve our wildlife sites, make them bigger, develop more of them and join them up (summarised as 'Bigger, Better, More and Joined').

NATIONAL PLANNING POLICY FRAMEWORK

The revised National Planning Policy Framework (NPPF) (Ministry of Housing, Communities and Local Government, 2023) refers to conserving and enhancing the natural environment. This requires Local Authorities in England to take measures to:

- Conserve and enhance biodiversity;
- Protect the habitats of these species from further decline;
- Protect the species from the adverse effect of development; and
- Refuse planning permission for development, if significant harm resulting from a development cannot be avoided, adequately mitigated, or, as a last resort, compensated for.

Although not currently a legal obligation, the 2023 revision to the NPPF refers to biodiversity and environmental net gains in the following paragraphs:

Transport Infrastructure

- Paragraph 108. "*Transport issues should be considered from the earliest stages of plan-making and development proposals, so that: …*
  d) the environmental impacts of traffic and transport infrastructure can be identified assessed and taken into account – including appropriate opportunities for avoiding and mitigating any adverse effects, and for net environmental gains."

  Planning decisions

- Paragraph 124 "*Planning decisions and planning policy should a) encourage multiple benefits from both urban and rural land … and taking opportunities to achieve net environmental gains - such as developments that would enable new habitat creation*."
- Paragraph 180 "*Planning policies and decisions should contribute to and enhance the natural and local environment by: … d) minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures*."
- Paragraph 185 "*To protect and enhance biodiversity and geodiversity plans should b) promote the conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery of priority species; and identify and pursue opportunities for securing measurable net gains for biodiversity*."
- Paragraph 186 "*When determining planning applications, local planning authorities should apply the following principles: a) if significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts) adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused; … and d) … opportunities to incorporate biodiversity improvements in and around developments, especially where this can secure measurable net gains for biodiversity*."

NATURAL ENVIRONMENT AND RURAL COUNTRYSIDE ACT

The Natural Environment and Rural Countryside (NERC) Act (HMSO, 2006) requires public bodies, including local authorities, '*to have regard to the conservation of biodiversity in England when carrying out their normal functions'*.

Section 40 sets out that:

- Paragraph 1. *"Every public authority must, in exercising its functions, have regard, so far as is consistent with the proper exercise of those functions, to the purpose of conserving biodiversity";* and that
- Paragraph 3. *"Conserving biodiversity includes, in relation to a living organism or type of habitat, restoring or enhancing a population or habitat".*

Section 41 sets out that:

- Paragraph 1*. "The Secretary of State must… publish a list of the living organisms and types of habitat … of principal importance for the purpose of conserving biodiversity"* based on consultation with Natural England*;* and that
- Paragraph 3a. Every planning authority must *"a) take such steps… to further the conservation of the living organisms and types of habitat included in any list published under this section, or (b) promote the taking by others of such steps".*
- Local Policy

Kirklees Local Plan 2019

The council will seek to protect and enhance the biodiversity and geodiversity of Kirklees, including the range of international, national and locally designated wildlife and geological sites, Habitats and Species of Principal Importance and the Kirklees Wildlife Habitat Network.

Within the Strategic Green Infrastructure Network identified on the Policies Map, priority will be given to safeguarding and enhancing green infrastructure networks, green infrastructure assets and the range of functions they provide. Development proposals within and adjacent to the Strategic Green Infrastructure Network should ensure:-

(i) the function and connectivity of green infrastructure networks and assets are retained or replaced;

(ii) new or enhanced green infrastructure is designed and integrated into the development scheme where appropriate, including natural greenspace, woodland and street trees;

(iii) the scheme integrates into existing and proposed cycling, bridleway and walking routes, particularly the Core Walking and Cycling Network, by providing new connecting links where opportunities exist;

(iv) the protection and enhancement of biodiversity and ecological links, particularly within and connecting to the Kirklees Wildlife Habitat Network. The council will support proposals for the
creation of new or enhanced green infrastructure provided these do not conflict with other Local Plan policies.

Proposals having a direct or indirect adverse effect on a Local Wildlife Site or Local Geological Site, Ancient Woodland, Veteran Tree or other important tree, will not be permitted unless the benefits of the development can be clearly shown to outweigh the need to safeguard the local conservation value of the site or feature and there is no alternative means to deliver the proposal. In all cases, full compensatory measures would be required and secured in the long term.

Development proposals will be required to:-

(i) result in no significant loss or harm to biodiversity in Kirklees through avoidance, adequate mitigation or, as a last resort, compensatory measures secured through the establishment of a legally binding agreement;

(ii) minimise impact on biodiversity and provide net biodiversity gains through good design by incorporating biodiversity enhancements and habitat creation where opportunities exist;

(iii) safeguard and enhance the function and connectivity of the Kirklees Wildlife Habitat Network at a local and wider landscape-scale unless the loss of the site and its functional role within the network can be fully maintained or compensated for in the long term;

(iv) establish additional ecological links to the Kirklees Wildlife Habitat Network where opportunities exist; and

(iv) incorporate biodiversity enhancement measures to reflect the priority habitats and

species identified for the relevant Kirklees Biodiversity Opportunity Zone.

Appendix D

BIODIVERSITY NET GAIN ASSESSMENT CALCULATIONS

Please see the Natural England SSM calculation tool file labelled “Appendix D Heckmondwike Bus Stop Small Sites Metric Calculation Tool”

Appendix E

HABITAT TRANSLATIONS AND CONDITION ASSESSMENTS

BASELINE

Table E-1 - Baseline UKHab Translations and Condition Assessments

JNCC	UKHab	UKHab Note	Condition	Condition Note
J2- Amenity grassland	Modified Grassland	The most suitable habitat description.	Moderate	This habitat is auto-assigned a default condition of moderate within the SSM.
A3.1 – Broadleaved Scattered Trees	Urban – Urban Trees	Urban trees are accounted for in the Metric, independent of the area-based habitats. Trees are categorised according to size, the details of which are presented within Natural England (2021b) BM3.1: Auditing and accounting for biodiversity – Technical Supplement Part 1a. Tree number and dimensions have been based on the Arboricultural Impact Assessment Report (WSP, 2021).	Moderate	This habitat is auto-assigned a default condition of moderate within the SSM.
J5 Other habitats	Developed land; sealed surface	The most suitable habitat description.	N/A	This habitat is auto-assigned a default condition of N/A within the SSM.

POST-DEVELOPMENT

Table E-2 - Post-Development Created Habitats - UKHab Translations and Condition Assessments

Landscape Classification	UKHab	UKHab Note	Target Condition	Condition Note
'Trees'	'Urban - Trees'	The most suitable habitat classification based upon the written description of the habitat within landscape plan. These trees have been classed as 'Small' in accordance with within Natural England (2022c), BM 3.1: Auditing and accounting for biodiversity – Technical Supplement Part 1a, due to the constraints imposed by the location of these trees within the Proposed Development.	Moderate	This habitat is auto-assigned a default minimum condition of moderate within the SSM. Outlined in Natural England (2022c) to reach a moderate condition the following is required: Passes 3 or 4 of 6 criteria. Criteria list: 1. The tree is a native species (or more than 70% within the block are native species) 2. The tree canopy is predominantly continuous, with gaps in canopy cover making up <10% of total area and no individual gap being >5 m wide (individual trees automatically pass this criterion). 3. The tree is mature or veteran (or more than 50% within the block are mature or veteran). 4. There is little or no evidence of an adverse impact on tree health by anthropogenic activities such as

Landscape Classification	UKHab	UKHab Note	Target Condition	Condition Note
				vandalism or herbicide use. There is no current regular pruning regime, so the trees retain>75% of expected canopy for their age range and height. 5. Micro-habitats for birds, mammals and insects are present e.g. presence of deadwood, cavities, ivy or loose bark. 6. More than 20% of the tree canopy area is oversailing vegetation beneath.
Seating, Roads, Recycled sculpture Art, Bus station.	Developed land; sealed surface.	The most suitable habitat classification based upon the written description of the habitat within landscape plan.	N/A-other	This habitat is auto-assigned a default condition of N/A-other within the SSM.
Verge cut into wildflower meadow	Modified grassland	The most suitable habitat classification based upon the written description of the habitat within landscape plan and planting lists provided.	Moderate	This habitat is auto-assigned a default minimum condition of moderate within the SSM. Outlined in Natural England (2022c) to reach a moderate condition the following is required: Passes 3 or 4 of 6 criteria, including essential criterion 1. Criteria list: 1. The appearance and composition of the vegetation closely matches characteristics of the

Landscape Classification	UKHab	UKHab Note	Target Condition	Condition Note
				specific grassland habitat type (see UKHab definition). Wildflowers, sedges and indicator species for the specific grassland habitat type are very clearly and easily visible throughout. the sward. NB - This criterion is essential for achieving moderate condition for non-acid grassland types only. 2. Sward height is varied (at least 20% of the sward is less than 7 cm and at least 20% is more than 7 cm) creating microclimates which provide opportunities for insects, birds and small mammals to live and breed. 3. Cover of bare ground is between 1% and 5%, including localised areas, for example, rabbit warrens. 4. Cover of bracken is less than 20% and cover of scrub (including bramble) is less than 5%. 5. There is an absence of invasive non-native species (as listed on Schedule 9 of WCA, 1981). Combined cover of species indicative of sub-optimal condition1 and physical damage (such as excessive poaching, damage from machinery use or storage, damaging levels of access,

Landscape Classification	UKHab	UKHab Note	Target Condition	Condition Note
				or any other damaging management activities) accounts for less than 5% of total area.
Extensive green roof	Other green roof	The most suitable habitat classification based upon the written description of the habitat within landscape plan and planting lists provided.	N/A (Moderate)	Based on condition sheets within metric guidance, the condition for green roof is auto-assigned 'N/A'. To avoid a calculation error, the SSM requires a condition to be inputted for the green roof. Therefore as a precaution, a moderate condition has been assigned.
Green wall	Façade Bound Green wall	The most suitable habitat classification based upon the written description of the habitat within landscape plan and planting lists provided.	Moderate	This habitat is auto-assigned a default minimum condition of moderate within the SSM. Outlined in Natural England (2022c) to reach a moderate condition the following is required: Passes 2 of 3 core criteria; OR Passes 3 of 3 core criteria but does not meet the requirements for good condition within criteria 2 and 3. Core criteria list: 1. Vegetation structure is varied, providing opportunities for insects, birds and bats to live and breed. A single structural habitat component /

Landscape Classification	UKHab	UKHab Note	Target Condition	Condition Note
				vegetation type should not account for more than 80% of the total habitat area. 2. There is a diverse range of flowering plant species, providing nectar sources for insects. These species may be either native, or non-native but beneficial to wildlife. NB - To achieve GOOD condition, criterion 2 must be satisfied by native species only (rather than non-natives beneficial to wildlife). Note that Biodiverse green roofs are exempt from this requirement, and can include non-native sedums, as set out in footnote 1. 3. Invasive non-native species (Schedule 9 of WCA) cover less than 5% of total vegetated area. NB - To achieve GOOD condition, criterion 3 must be satisfied by a complete absence of invasive non-native species (rather than <5% cover).
Rain Gardens	Sustainable Urban Drainage feature	The most suitable habitat classification based upon the written description of the habitat within landscape plan and planting lists provided.	Moderate	This habitat is auto-assigned a default minimum condition of moderate within the SSM. Outlined in Natural England (2022c) to reach a moderate condition the following is required: 'Passes 2 of 3 of 4 criteria; OR Passes 4 of 4 criteria but does not meet the requirements for good condition within criteria 2 and 3: Core criteria list:

Landscape Classification	UKHab	UKHab Note	Target Condition	Condition Note
				1. Vegetation structure is varied, providing opportunities for insects, birds and bats to live and breed. A single structural habitat component / vegetation type should not account for more than 80% of the total habitat area. 2. There is a diverse range of flowering plant species, providing nectar sources for insects. These species may be either native, or non-native but beneficial to wildlife. NB - To achieve GOOD condition, criterion 2 must be satisfied by native species only (rather than non-natives beneficial to wildlife). Note that Biodiverse green roofs are exempt from this requirement, and can include non-native sedums, as set out in footnote 1. 3. Invasive non-native species (Schedule 9 of WCA) cover less than 5% of total vegetated area. NB - To achieve GOOD condition, criterion 3 must be satisfied by a complete absence of invasive non-native species (rather than <5% cover). 4. The water table is at or near the surface throughout the year. This could be open water or saturation of soil at the surface.

Landscape Classification	UKHab	UKHab Note	Target Condition	Condition Note
Wildflower meadow	Other neutral grassland	The most suitable habitat classification based upon the written description of the habitat within landscape plan and planting lists provided.	Moderate (fixed condition)	1. The appearance and composition of the vegetation closely matches characteristics of the specific grassland habitat type (see UKHab definition). Wildflowers, sedges and indicator species for the specific grassland habitat type are very clearly and easily visible throughout the sward. NB - This criterion is essential for achieving moderate condition for non-acid grassland types only. 2. Sward height is varied (at least 20% of the sward is less than 7 cm and at least 20 per cent is more than 7 cm) creating microclimates which provide opportunities for insects, birds and small mammals to live and breed. 3. Cover of bare ground between 1% and 5%, including localised areas, for example, rabbit warrens. 4. Cover of bracken less than 20% and cover of scrub (including bramble) less than 5%. 5. There is an absence of invasive non-native species (as listed on Schedule 9 of WCA, 1981). Combined cover of species indicative of sub-optimal condition1 and physical damage (such as excessive poaching, damage from machinery use or storage, damaging levels of access, or any other damaging management activities) accounts for less than 5% of total area.

8 First Street
Manchester
M15 4RP

wsp.com