



A629 Improvement Scheme, Kirklees

Biodiversity Enhancement & Management Plan (BEMP)

November 2024

Waterman Infrastructure & Environment Limited

Trinity Court, 16 John Dalton Street, Manchester, M2 6HY
www.watermangroup.com

Client Name: Kirklees Metropolitan Borough Council
Document Reference: WIE20953-101-R-1-2-2-BEMP
Project Number: WIE20953-101

Quality Assurance – Approval Status

This document has been prepared and checked in accordance with
Waterman Group's IMS (BS EN ISO 9001: 2015, BS EN ISO 14001: 2015 and BS EN ISO 45001:2018)

Issue	Date	Prepared by	Checked by	Approved by
First	5 September 2024	Daniel Ross Ecologist	Leila Payne Senior Associate Director (Ecology)	Leila Payne Senior Associate Director (Ecology)
Second (address client queries)	7 th November 2024	Rachael Taggart Environmental Consultant	Leila Payne Senior Associate Director (Ecology)	Leila Payne Senior Associate Director (Ecology)

Comments

First

Disclaimer

This report has been prepared by Waterman Infrastructure & Environment Limited, with all reasonable skill, care and diligence within the terms of the Contract with the client, incorporation of our General Terms and Condition of Business and taking account of the resources devoted to us by agreement with the client.

We disclaim any responsibility to the client and others in respect of any matters outside the scope of the above.

This report is confidential to the client and we accept no responsibility of whatsoever nature to third parties to whom this report, or any part thereof, is made known. Any such party relies on the report at its own risk.

Contents

Contents

1. Introduction	1
2. Aims and Objectives of the BEMP	3
3. Methodology	4
4. Project Background	7
5. Baseline	9
6. Roles and responsibilities	11
7. Land Use Summary	13
8. Intervention	15
9. Monitoring	19
10. Conclusion	22

Tables

Table 1: Summary of Habitat Creation / Enhancement.....	2
Table 2: Site Overview.....	8
Table 3: Summary of Management Plan	9
Table 4: Roles and Responsibilities	11
Table 5: Habitat Intervention	15
Table 6: Monitoring Methods and Intervals	19

Appendices

- A. Management and Monitoring Schedules
- B. Risks Associated with Habitat Creation and Management
- C. Drawings
- D. Approved Establishment Schedule for Planting (Years 1-5)

Contents

1. Introduction

- 1.1. This Biodiversity Enhancement and Management Plan (BEMP) has been prepared by Waterman Infrastructure & Ltd (Waterman) on behalf of Kirklees Metropolitan Borough Council (the 'Client') and relates to proposed highway improvements (hereafter referred to as the 'Site').
- 1.2. It sets out an evaluation of the features to be managed and enhanced in order to achieve the predicted Biodiversity Net Gain (BNG) scores as stated in previous reporting.
- 1.3. The BEMP is required to discharge Condition 12 of the granted planning permission (REF: 2021/48/92734/W), which reads as follows –

No development shall commence until a Biodiversity Enhancement and Management Plan (BEMP) is submitted to and approved by the Local Planning Authority. The plan shall demonstrate how a minimum 15.46% net gain in habitat units and a 1,273.33% net gain in hedgerow units are to be achieved post development and will include details of the following:

- a. *Description and evaluation of features to be managed and enhanced;*
- b. *Extent and location/area of proposed enhancement works on appropriate scale maps and plans;*
- c. *Ecological trends and constraints on site that might influence management;*
- d. *Aims and Objectives of management;*
- e. *Appropriate management Actions for achieving Aims and Objectives;*
- f. *An annual work programme (to cover an initial 5 year period capable of being rolled forward over a period of 30 years);*
- g. *Details of the management body or organisation responsible for implementation of the BEMP;*
- h. *Ongoing monitoring programme and remedial measures; and*
- i. *The BEMP will be reviewed and updated every 5 years and implemented for a minimum of 30 year*

The BEMP shall include details of the legal and funding mechanisms by which the long-term implementation of the BEMP will be secured by the developer with the management body responsible for its delivery. The BEMP shall also set out (where the results from the monitoring show that the Aims and Objectives of the BEMP are not being met) how contingencies and/or remedial action will be identified, agreed and implemented so that the development still delivers the fully functioning biodiversity objectives of the originally approved BEMP. The approved BEMP will be implemented in accordance with the approved details.

Reason: In order to ensure the development provides ecological enhancement and creation measures sufficient to provide a biodiversity net gain in accordance with Policy LP30 of the Kirklees Local Plan and the National Planning Policy Framework. This pre-commencement condition is necessary to ensure details relating to the required biodiversity net gain are devised and agreed at an appropriate stage of the development process.

- 1.4. This report is based upon the Natural England Habitat Management and Monitoring Plan (HMMP) Template (HMMPT, Natural England & DEFRA November 2023) ¹ and emerging best practice and has been produced based on the following supporting documents:
- WIE14496-100-R-9-4-2-EcIA², WIE14496-100-R-10-5-2-EcIA³, WIE14496-100-R-11-5-2-EcIA⁴
 - Biodiversity Net Gain (BNG) Assessment⁵
 - Landscape proposals⁶ submitted alongside the planning application and used to inform the BNG Assessment.
- 1.5. The BEMP provides detailed management and monitoring information for years 1 – 5, with broader management aims for the lifetime of the BNG commitment i.e. how BNG can be achieved over a 30-year period.
- 1.6. The BEMP sets out the approach to secure the anticipated BNG within the Site. The main body of this report provides an introduction and methodology to this BEMP. All Baseline habitat information can be found within the BNG report².
- 1.7. Only those habitats which are assessed as created / enhanced within the BNG Report and contribute to the BNG score are included within this report.
- 1.8. The habitats and methods detailed in this report relate to 3 distinct areas, referred to as; Area B, Area C, and Area D, the location of which are shown in Figure 1 - 3.
- 1.9. The table below outlines the habitats which are to be created / enhanced within each of these areas. Only those habitats which contribute significantly to the BNG and require management interventions to achieve a certain targeted condition are included in this report. As outlined in Table 1 below.

Table 1: Summary of Habitat Creation / Enhancement

Area	Habitat Created	Habitat Enhanced
Area B	Line of Trees (0.04km) – Moderate Condition	N/A
Area C	Native Species Rich Hedgerow (0.02km) – Moderate Condition	Woodland and Forest – Other Broadleaved Woodland (0.23Ha) – Poor – Moderate condition
Area D	Native Species Rich Hedgerow with trees (0.45) – Moderate Condition Line of Trees (0.1km) -Moderate Condition	Grassland – Modified Grassland (0.25ha) Urban – Vegetated Garden (0.07Ha) to Other Broadleaved Woodland in Poor Condition

¹ Natural England (2023) Habitat Management and Monitoring Plan Template Version 1.0 (JP055). Gov.uk.

² WIE14496-100-R-9-4-2-EcIA, June 2021, Cavalry Arms, Huddersfield (Area B), WIE14496-100-R-10-5-1-EcIA, WIE14496-100-R-11-5-2-EcIA

³ Waterman IE (2021), Ecological Impact Assessment, Prince Royd, Huddersfield (Area C), WIE14496-100-R-10-5-1-EcIA

⁴ Waterman IE (2021), Ecological Impact Assessment, Yew Tree Road to Ainley Top, Huddersfield (Area D), WIE14496-100-R-11-5-2-EcIA

⁵ Waterman IE (2023) Biodiversity Net Gain Report, A629 Improvement Scheme, Kirklees (Ref: WIE14496-100-R-19-12-3-BNG-ISSUE)

⁶ Kirklees Council drawing references: TF5-Area B-P-LSC-2-rev 1, TF5-Area C-P-LSC-1, TF5/Area D/P/LSC-1, TF5/Area D/P/LSC-2, TF5/Area D/P/LSC-3, TF5/Area D/P/LSC-4.

2. Aims and Objectives of the BEMP

- 2.1. The BEMP sets out the information required to satisfy Condition 12 of the granted permission as outlined in Paragraph 1.3.
- 2.2. The BEMP is designed to establish the management strategies necessary to meet the habitat targets in terms of type and condition, as identified in the BNG report.
- 2.3. This document outlines the methodology for achieving the required 10% Biodiversity Net Gain, so that the project remains compliant with policy. It sets measurable targets for success and provides a framework for implementing adjustments to management practices to ensure these targets are met.

3. Methodology

Guidance

- 3.1. This assessment has been produced in accordance with the HMMP (JP055)¹ and the 2.0 biodiversity metric tools and guides⁷.
- 3.2. Given that the initial BNG assessment used the 2.0 Metric and associated guidance, this assessment also makes reference to the same guidance to ensure continuity.

Land Ownership

- 3.3. The Site (the red line boundary) includes land owned by or under the control of Kirklees Metropolitan Borough Council.

Stakeholders and Existing Pressures

- 3.4. The most significant current pressure on baseline habitats, which could impact both current and future biodiversity value, arises from public usage. Areas that are publicly accessible or primarily used for recreation near population centres are likely to experience frequent recreational activities, such as walking and dog walking. These activities can negatively affect the value of these areas through trampling, disturbance, and eutrophication.
- 3.5. Members of the public are important stakeholders that can typically affect what management is appropriate for the Site. The public have access to the Site and this may increase litter, trampling or soil fertility from dog faeces which may limit the success of any management interventions implemented.

Legislation and Policy and Best Practice

- 3.6. None of the habitats to which this document relate are afforded any legal protections.
- 3.7. Policies that underpin a site are also an important consideration when determining a site's BNG viability. For example, Biodiversity Action Plans (BAP) and Local Plans are often underpinned by local policy frameworks and commitments. The Sites has habitats that are listed within the local BAP⁸, or Local Plans⁹, these should be targeted for BNG and avoided by the Development where possible to maximise BNG and align with local conservation priorities.
- 3.8. The Wildlife and Countryside Act (WCA) (1981 as amended) outlines the legal protection of active bird nests., making it an offence to intentionally or recklessly destroy a nest. The Site supports area suitable for supporting nesting in the form of existing trees, woodland and scrub. Any vegetation clearance should be undertaken outside of the period March – September (inclusive) or else be preceded by a nesting bird check by a suitably qualified ecologist. The project should consider carrying out relevant vegetation clearance in the period October – February to avoid potential impacts.
- 3.9. Schedule 9 of the WCA lists a number of Invasive Non-Native Species (INNS) which it is an offence to cause to spread in the wild. Although no invasive species were identified during baseline survey, these could have subsequently colonised, especially given the urban nature of the Site. Consideration is given to INNS in the recommendations for management and monitoring.

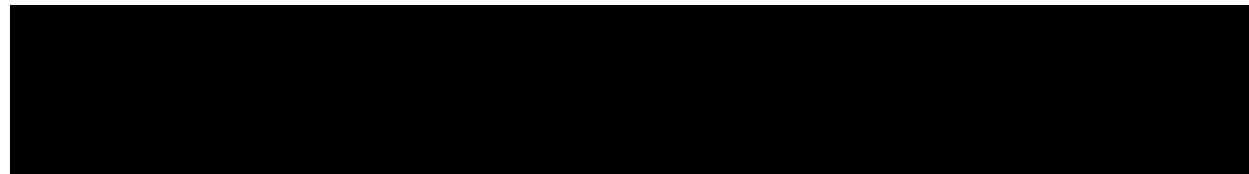
⁷ DEFRA (2024) Statutory biodiversity metric tools and guides. Available at <https://www.gov.uk/government/publications/statutory-biodiversity-metric-tools-and-guides>

⁸ Kirklees Biodiversity Action Plan - <https://www.kirklees.gov.uk/beta/delivering-services/policies-and-strategies.aspx>

⁹ Kirklees Local Plan Strategies and Policies Adopted 27 February 2019

3.10. In accordance with best practice guidance¹⁰ in relation to pollinators, the use of herbicide should be avoided where possible.

3.11.



Habitat Suitability

3.12. Certain habitats, as defined by the UK Habitat (UKHab) Classification system¹¹, are more suitable for enhancement or creation than others. The type, distinctiveness, condition, extent of each habitat, strategic significance, time to target condition, difficulty of creation or restoring a habitat, habitat banking, delays in creation/enhancement of habitats and encroachment (applicable for watercourses only) are all factors that require consideration when selecting a site for enhancement / creation.

- Distinctiveness value is automatically generated by the 2.0 Metric (hereafter referred to as the Metric) based on habitat type. Habitats will be defined as Very Low, Low, Medium, High or Very High in value. The enhancement/creation of lower distinctiveness habitat provide less BNG units per area/length of habitat. Furthermore, when considering habitat creation, any loss or enhancement must be replaced by a 'like-for-like' habitat of the same or higher, broad type or distinctiveness. This is called 'Trading Rules'. Full description is defined within the Statutory Metric – Technical Supplement¹² The type of trading depends on the distinctiveness of habitat lost, for example very low distinctiveness habitat will not require trading, however very high distinctiveness habitat or 'irreplaceable habitat' will require bespoke compensation agreed with relevant authorities, and high distinctiveness habitat must be replaced with habitat of the same distinctiveness or above.
- The 'Condition Assessment'¹³ involves assessing each habitat type / parcel as per the associated condition sheet, resulting in a condition score (Good, Moderate or Poor) which is then input into the Metric. Habitat of Poor and Moderate condition provide opportunity for enhancement.
- Strategic significance utilises published local plans and objectives to identify local priorities for targeting biodiversity and nature improvement. The higher the strategic significance, the more BNG units can be gained.
- Time to target condition is a standard score automatically generated by the Metric based on how long the habitat type takes to establish. The higher the time to target condition, the greater penalty received in terms of BNG units.
- Projects carry an associated risk based on the difficulty and uncertainty of successfully creating, restoring or enhancing a habitat. A multiplier is therefore applied automatically by the Metric to recognise the difficulty of creating different habitats, detailed in the user guide⁵.
- Riparian Zone and In-Watercourse Encroachment (relevant to linear watercourses only). The loss of either quantity or quality of the riparian zone or within the watercourse itself will have a bearing on its ecological use and function.

3.13. See **Appendix B** for typical risks associated with the management each habitat type. Full details for Site specific BNG information is provided within a BNG report².

¹⁰ <https://cdn.buglife.org.uk/2023/12/Managing-Parks-and-Green-Spaces-for-Pollinators-08.pdf>

¹¹ UKHab Ltd (2003). UK Habitat Classification System Version 2.0

¹² Defra (2019) The Biodiversity Metric 2.0 Technical Supplement.

¹³ Defra. (2023) Biodiversity Metric 4.0 Habitat Condition Assessment Sheets and Instructions

Limitations and Assumptions

- 3.14. It is important to note that this report does not define the full detailed methodology for a BEMP, the referenced guidance documents should be referred to where relevant and if necessary.
- 3.15. This report has been reviewed and approved by ecologists (Leila Payne CEcol, CEnv, MCIEEM) who meets the requirements of a Suitable Qualified Ecologist (SQE) in this context.
- 3.16. It is important to note that this report and the associated documents are based on current guidance that underpins the documents, and it is expected that these will be subject to ongoing updates. The current version of the HMMP Natural England template¹⁴ is Version 1.0 and was last updated 29/11/2023.
- 3.17. The BEMP is based on the findings and recommendations of the BNG report which follows the BNG Good Practice Principles¹⁵ and the methodology set out in the following guidance document, relevant at the time of undertaking the BNG assessment:
- The Biodiversity Metric 2.0 – User Guide¹⁶ (hereafter referred to as ‘the User Guide’).
 - The Biodiversity Metric 2.0 – Technical Supplement¹⁷
- 3.18. The BEMP is informed by habitat descriptions as provided in the relevant EclAs¹⁸ which follow the industry guidance¹⁹ and the mitigation hierarchy²⁰.

¹⁴ Natural England (2023) Habitat Management and Monitoring Plan Template Version 1.0 (JP055). Gov.uk.

¹⁵ CIEEM (2019) Biodiversity net gain. Good practice principals for Development. London, UK

¹⁶ IAN CROSER A , SUSANNAH GOLD B , MAX HEAVER D , MATT HEYDON A , LAUREN MOORE D , STEPHEN PANKS A , SARAH SCOTT C , DAVE STONE A & NICK WHITE A . 2019. The Biodiversity Metric 2.0: auditing and accounting for biodiversity value. User guide (Beta Version, July 2019). Natural England

¹⁷ Natural England (2019) The Biodiversity Metric 2.0: Auditing and Accounting for Biodiversity Value: Technical Supplement (Beta version)

¹⁸ see footnote 2,3, and 4.

¹⁹ CIEEM (2017). *Guidelines for Preliminary Ecological Appraisal*. Technical Guidance Series. Chartered Institute of Ecology and Environmental Management, Winchester.

²⁰ BS 42020:2013 Clause 5.2

4. Project Background

Location

- 4.1. The Site covers 3 distinct areas as shown in Figure 1 - 3;
- **Area B** - Cavalry Arms, centred around the junction of Birkby Road, East Street and Halifax Road (Figure 1; OS Grid Reference SE 12246 18517);
 - **Area C** - Prince Royd, adjacent to Halifax Road (Figure 2; OS Grid Reference SE 12026 18649);
 - **Area D** – Yew Tree Road to Ainley Top, centred around a field adjacent to Ainley Top roundabout (Figure 3; OS Grid Reference SE 11551 19125).

Development type

- 4.2. The development comprises of highway improvement works including the following –
- road widening;
 - road resurfacing;
 - new and improved footways to allow more traffic lanes and be better for pedestrians;
 - existing footway widening;
 - new soft landscaping and trees; and
 - repositioning of signal-controlled pedestrian crossings;
 - new off-road parking arrangements for residents affected by parking restrictions (off Halifax Road (A629) within a currently wooded area);
 - new controlled and un-controlled pedestrian crossings; and
 - the inclusion of a parking restriction zone;
 - new and improved footways to allow more traffic lanes and be better for pedestrians;
 - island to keep traffic separated and allow pedestrians to cross the road safely;
 - two way and one-way cycle lane;

Baseline Studies

The Site was subject to the following ecological assessments:

- Ecological Impact Assessment (EclA); and
- Biodiversity Net Gain Assessment (BNG).

Description of Site

- 4.3. The Site comprises the following habitats of relevance to the BEMP as identified on **Figure 4 - 6**; a full description of these and adjacent habitats can be found in the EclAs²¹:

²¹ see Waterman reports WIE14496-100-R-9-4-2-EclA, WIE14496-100-R-10-5-1-EclA, WIE14496-100-R-11-5-2-EclA

- Woodland w1f7, 341
- Modified Grassland g4, 58
- Vegetated Garden u1, 231

Site Overview

Table 2: Site Overview

Site Overview	
Project type	On-site
Landowner	Kirklees Metropolitan District Council
Land Manager	Kirklees Metropolitan District Council
Period covered by this management plan	2026-2056 (based on estimated completion date of April 2026.)
Planning authority	Kirklees Metropolitan District Council
Planning reference (if applicable)	2021/48/92734/W
BNG register reference (if applicable)	N/A
Funding Mechanism	Kirklees Revenue Budget (Maintenance Team)
Central OS grid reference	Area B - SE 12246 18517, Area C - SE 12026 18649, Area D - SE 11551 19125
Are any Irreplaceable Habitats present onsite	No

5. Baseline

Summary of Management Plan

- 5.1. **Table 3** below provides a Summary of the Management Plan. An Establishment Schedule for planting has already been approved by Kirklees to cover the first 5 years regime²². This has been incorporated into the Summary of Management Plan (Table 3) and the schedule has been adjusted accordingly.
- 5.2. Creation and management objectives are guided by the targeted conditions and relevant condition criteria as per the 2.0 Metric User Guide²³.

Table 3: Summary of Management Plan

Summary of Management Plan: Habitats to be Created and Enhanced
The habitat types recorded on Site to be created and enhanced are described below and should be read in association with Figure 4-6 .
Created Habitat
<u>Line of Trees (Area B)</u> <i>Target - Moderate Condition</i>
<u>Species Rich Hedgerow / Species Rich Hedgerow with Trees (Area C & D)</u> <i>Target – Moderate condition</i>
Enhanced Habitat
<u>Woodland from vegetated garden (Amenity grassland) (Area D)</u> <i>Target – Poor condition</i>
<u>Modified grassland to other neutral grassland (Moderate Condition) (Area D)</u> <i>Target – moderate condition</i>
Timescales for Actions
The BEMP will be enacted over a 30-year period with annual monitoring against management targets in the first 5 years, followed by visits every 5 years until the 30-year management commitment has been completed.
Monitoring Requirements
Monitoring will include compiling a species list, including non-desirable species, description of structure and evidence of, neglect and damage. This will confirm the habitat category and condition to verify if targets have been met. This will be completed annually for the first 5 years and then every 3 years over the 30-year period.
Required Consents and Licences
The landowner(s) and land manager(s).

²² Confirmed via email Farhad Rahman (Kirklees) to Leila Payne (Waterman) 'Re: Kirklees BEMP- (Draft) 9th October 2024)

²³ The Biodiversity Metric 2.0: Auditing and accounting for biodiversity value: technical supplement (Beta version, July 2019). Natural England

Legal Agreement

Planning obligation via condition.

6. Roles and responsibilities

- 6.1. Determining roles and responsibilities in a habitat management and monitoring plan is essential for effective implementation, accountability, communication, and resource management. It ultimately contributes to the success of the plan and the enhancement, creation or retention of the habitats. A responsible person in the form of an ecologist, landowner/land manager and management organisation needs to be chosen. A competent person is someone who can demonstrate they have acquired through training, qualifications or experience, or a combination of these, the knowledge and skills enabling that person to perform specified tasks. For details of the responsible persons and organisation(s) for delivering this management plan refer to the table below.

Table 4: Roles and Responsibilities

Ecologist or Other Professional Responsible for BEMP Production				
Name or Initials		DR/LP (authors of this BEMP)		
Organisation		Waterman (Baseline Surveys, and BEMP production)		
Responsibility	Start Date:	April 2026	End Date:	April 2026
<p>The ecologist is responsible for conducting detailed biodiversity assessments and baseline surveys to establish the existing biodiversity levels in the habitat. This involves identifying current land use, habitats and the conditions and as well as opportunities for habitat enhancement and creation. Based on the baseline assessment, the ecologist helps set clear and achievable biodiversity targets for the habitat management plan. These targets define the desired outcomes in terms of biodiversity enhancement and guide decision-making throughout the project. The ecologist (often in collaboration with a landscape architect) plays a crucial role in designing habitat enhancements and restoration measures that aim to increase biodiversity net gain, including the identification of the appropriate season for management tasks that correspond to each landscape element when soil and weather conditions are suitable. This may involve creating new habitats, restoring degraded areas, planting native species, and implementing green infrastructure solutions. Where appropriate, ecologists engage with stakeholders, ranging from project managers, local wildlife recording groups to landowners, ecologists ensure that biodiversity net gain initiatives comply with relevant environmental regulations, biodiversity policies, and best practices in conservation. In cases where biodiversity loss is unavoidable due to development activities, the ecologist assists in developing mitigation and compensation measures to offset any impacts. Importantly, a competent ecologist should be responsible for implementing robust monitoring programmes will be produced to track changes in biodiversity levels and evaluate the success of BNG measures. Monitoring data helps assess progress towards biodiversity targets and informs adaptive management decisions. They prepare reports documenting biodiversity outcomes, monitoring results, and the overall effectiveness of habitat management activities.</p>				
Statement of Competency				
Demonstrate competency in conducting biodiversity assessments, undertaking biodiversity net gain (BNG) assessments, ecological input into landscape design and producing habitat management plans.				
Management Body				
Name or Initials		Land Manager to be a responsible and competent person to be appointed by Kirklees Council		
Organisation		Kirklees Metropolitan Borough Council or appointed other management body		

Responsibility	Start Date:	April 2026	End Date:	April 2056
<p>The responsibilities of the appointed land manager (this may be the same as the land owner, internal land manager or may be a separately appointed third party management body) within a BEMP typically revolve around management and stewardship of the land in order to realise the objectives of the BEMP. These responsibilities include:</p> <ol style="list-style-type: none"> (1) Implementing the habitat creation tasks described in this BEMP for the specified duration. (2) Implementing the habitat management practices described in this BEMP for the specified duration. (3) Monitoring the establishment of habitats and identifying the requirement for remedial action (e.g. failed planting) particularly within the establishment period. (4) Participating in the design and implementation of remedial action if required within the lifetime of the BEMP, if this is identified as a requirement through monitoring. 				
Statement of Competency				
Demonstrate competency in habitat/landscape creation and management through relevant training, qualifications or experience, or a combination of these.				
LPA or Responsible Body for Reviewing				
Name or Initials		Kirklees Council to assign competent person to implement monitoring in accordance with BEMP		
Organisation		Kirklees Council		
Responsibility	Start Date:	April 2026	End Date:	April 2056
<p>The implementation of the monitoring programme is ultimately the responsibility of Kirklees Council. Monitoring visits and documented outputs should be completed by a competent ecologist (to be appointed by Kirklees Council) who can verify the habitat category and condition, and whether the predicted biodiversity units are being delivered.</p> <p>Where remedial action is required (e.g. target habitat and condition have not been met) a competent ecologist, in collaboration with land manager, a landscape architect and/or habitat creation contractor (as necessary) should be appointed to identify what is required to meet the target habitat and condition in order to deliver the predicted biodiversity units. This may result in an update to the BEMP being required.</p>				
Statement of Competency				
<p>Demonstrate competency in habitat surveys (UK Hab category and condition assessment) (monitoring).</p> <p>Demonstrate competency in habitat restoration and management (identification of remedial action).</p>				

7. Land Use Summary

Current Land Use

- 7.1. The land to which this BEMP relates comprises a mixture of woodland and grassland closely associated with the existing A629, running through areas of development to the north west of Huddersfield town centre.

Baseline Habitats

Area B

Vegetated Garden

- 7.2. Amenity grassland is present within residential gardens associated with Area B. Species recorded include perennial rye grass *Lolium perenne*, common daisy *Bellis perennis*, creeping buttercup *Ranunculus repens*, common dandelion *Taraxacum officinale*, cat's-ear *Hypochaeris radicata*, groundsel *Senecio vulgaris* and ribwort plantain *Plantago lanceolata*. The grassland is managed to a short sward length of c. 100mm.

Area C

Woodland

- 7.3. A large area of semi-natural broad-leaved woodland is present on and directly adjacent to Area C.
- 7.4. The woodland comprises unmanaged natural regeneration, and this is reflected in the woodland's species composition. Species recorded within the woodland include sycamore *Acer pseudoplatanus*, silver birch *Betula pendula*, ash *Fraxinus excelsior*, goat willow *Salix caprea*, common alder *Alnus glutinosa*, blackthorn *Prunus spinosa*, hawthorn *Crataegus monogyna*, holly *Ilex aquifolium*, horse chestnut *Aesculus hippocastanum* and elder *Sambucus nigra*. The ground flora of the woodland comprises a mosaic of vegetation, including ivy *Hedera* spp., bramble *Rubus fruticosus*, herb robert *Geranium robertianum*, hedge bindweed *Calystegia sepium*, fern *Dryopteris* spp., and horsetail *Equisetum* spp. The majority of the trees are young to semi mature in age and thus represent small and immature specimens; however, a small number of larger more mature specimens are present within the western extent of the woodland.

7.5.

Area D

Grassland

- 7.6. The field at the south of Area D (to the south of Ainley Top Roundabout) is dominated by species-poor semi-improved grassland. Species recorded include ragwort *Senecio jacobaea*, dock, ribwort plantain, cat's-ear *Hypochaeris radicata*, red clover, rough hawkbit *Leontodon hispidus*, meadow foxtail *Alopercurus pratensis*, perennial rye grass and smooth meadow grass *Poa pratensis*. Small areas of bare ground and scrub are scattered within.

Vegetated Garden

- 7.7. Amenity grassland is present adjacent to Ainley Top roundabout and within land at 123 Yew Tree Road. Species recorded include perennial rye grass *Lolium perenne*, red clover *Trifolium pratense*, common daisy *Bellis perennis*, dock *Rumex* spp., common dandelion *Taraxacum officinale* and ribwort plantain *Plantago lanceolata*.

Other Land Use and Pressures

- 7.8. Recreational Use: The newly created and enhanced areas of habitat will be closely associated with the existing highway and pedestrian walking routes, and as such some level of public disturbance is to be expected.

Specific Management Operations

- 7.9. The habitat types to be created on site are described below and should be read in association with **Figure 4-6**

Context for Management Activities

- 7.10. The areas to be covered are all close to the existing highway network and comprise either publicly accessible areas, or in the case of Area D, fenced off grazed pasture. Currently management is unknown, although publicly accessible areas are likely to be monitored and maintained to ensure safety of public users. Existing amenity grass areas are likely regularly mown. We are not aware of any current management provision relating to ecology / biodiversity.

Proposed Land Use

- 7.11. All areas of created or enhanced habitats will be part of highway improvements which will improve public access.

Management Regimes

- 7.12. There is currently no habitat specific management related to the existing woodland / grassland. Amenity grassland (Vegetated garden) is subject to regular cuts to maintain a short sward.

8. Intervention

Planned Management Activities

- 8.1. Under this BEMP operations would need to be undertaken to ensure that the habitat strategy can be achieved through a long-term, co-ordinated and informed approach. **Appendix A** sets out the prescriptions for management and monitoring operations to be undertaken at the Site over a 30-year period. It should be noted however that given its lifespan, this BEMP will remain an active document, within which those habitat maintenance and management operations currently detailed may be required to be updated pending the results of on-going monitoring and any remedial action (if required).

Habitat Retention and Enhancement

- 8.2. Habitats being retained in the existing condition may still require ongoing measures to maintain their baseline condition. Protective measures will be implemented and maintained to protect all retained habitats throughout the project.
- 8.3. Management schedules play a key role in ensuring that habitat enhancement and creation projects are well-planned, efficiently executed, and successfully meet their BEMP aims and objectives.
- 8.4. The schedules listed in **Appendix A** are intended to layout the proposed monitoring methods and intervals to cover the long-term BNG agreement period, split into key milestone periods for progression and success monitoring.
- 8.5. In addition, the schedules seek to outline the long-term (1-30 year) habitat maintenance requirements in order to maintain the initial enhancement intervention and meet the desired condition criteria targeted for the Site.
- 8.6. See **Table 5** below for the recommended Site-specific habitat intervention.

Table 5: Habitat Intervention

Principles Informed by Design Stage
<p>The Site features and baseline information influenced the Site's habitat retention, creation and enhancement aspirations during the early stages of the project design in the following ways:</p> <ul style="list-style-type: none"> • Habitats within the control of Kirklees Metropolitan Borough Council • Use of BNG Metric indices such as the distinctiveness to satisfy trading rules and current condition. <p>Relevant area of habitat enhancement / creation are shown in Figures 4-6.</p> <p>The conditions of proposed habitats have been predicted by applying professional judgement and precautionary principles. As such, the most conservative allocation of habitat condition has been applied to the Metric. This is also based on the assumption that all prescribed management practices detailed in this BEMP will be adhered to and practises will be adopted as required according to BNG best practice principles.</p> <p>The proposed habitat creation and enhancement is provided below, with intervention measures outlined:</p> <ul style="list-style-type: none"> • Creation of Line of trees in Moderate condition (Area B). • Creation of native species rich hedgerow in Moderate condition (Area C) • Enhancement of woodland (Other Broadleaved Woodland) from poor to moderate condition (Area C) • Creation of Native species rich hedgerow with trees in moderate condition (Area D)

In addition to the habitat enhancement and creation, it is important that habitats outside the scope of this document (habitats which do not contribute towards the BNG score) are subject to standard landscape management provision to ensure success.

The schedules listed in the Monitoring section below are intended to layout the proposed monitoring methods and intervals to cover the long-term BNG agreement period, split into key milestone periods for progression and success monitoring. In addition, the schedules seek to outline the long-term (1-30 years) habitat maintenance requirements in order to maintain the initial enhancement intervention and meet the desired condition criteria targeted for each habitat.

Habitat Creation

The habitat types to be created on site are described below and should be read in association with **Figures 4-6**.

Line of Trees (Area B)

Target - Moderate Condition

The condition assessment for this habitat type is assessed according to the continuity of the canopy, and moderate condition is defined as below –

- trees < 1/3 expected fully mature height
- gaps make up <10% of total length and there are no canopy gaps >5 m

This is achievable after 30 years provided the trees are planted at suitable intervals. To ensure continuous canopy cover after the 30-year management term the trees should be planted at 5m intervals. Native species should be selected.

Species Rich Hedgerow / Species Rich Hedgerow with Trees (Area C & D)

Target – Moderate condition

A 1 m strip adjacent to the hedgerow should be sown with an appropriate seed mix (Emorsgate 'EH1F Wild Flowers for Woodland Hedgerow' or similar).

Hedgerow should be managed to a minimum height and width of >1.5m (excluding trees).

Annual cuts (when required) should be undertaken outside of the nesting bird season (ideally March, or October)

Vertical gapping should be monitored to ensure the gap between the ground and base of the canopy is less than 0.5m. This should be achievable through regular management as above.

Management as above will ensure that gaps in the hedgerows are less than 10% of the hedge length and there are no canopy gaps of greater than 5m.

Regular checks for invasive and neophyte species should be carried by a suitably qualified ecologist according to BSBI definitions and herbicide or manual removal carried out as required by management team, directed by an ecologist.

Regular checks should be carried out by a suitably qualified ecologist in to confirm cover of undesirable species, with management interventions being advised as required.

Management Targets –

1. Hedgerow should achieve a height and width of >1.5m (excluding trees) after 30 years.
2. Less than 0.5m gap from ground to base of canopy
3. gaps in the hedgerows are less than 10% of the hedge length and there are no canopy gaps of greater than 5m.
4. Undesirable species (nettles (*Urtica* spp.), cleavers (*Galium aparine*) and docks (*Rumex* spp.)) should constitute less 20% of the ground cover if undisturbed areas.

Habitat Enhancement

The habitat types recorded on Site to be enhanced are described below and should be read in association with **Figures 4-6**.

Woodland (enhanced from vegetated garden / amenity grassland) (Area D)

Target – Poor Condition

Woodland creation has targeted ‘poor’ condition in the BNG assessment, and as such the no specific management prescriptions over and above the standard landscape provision regarding planting and initial establishment of planting is required to achieve the stated goal in the BNG report. Creation and management should be done in accordance with relevant landscape plans.

Woodland (enhanced from Poor to Moderate condition) (Area C)

Target – Moderate Condition

Retained woodland will be managed to achieve moderate condition through targeted interventions design to satisfy the condition criteria which are considered achievable in the context of the baseline.

An up-to-date baseline of the woodland will be confirmed prior to any management to refine and target the interventions listed below.

The presence and coverage of invasive species will be confirmed in year 1, and a scheme of removal implemented as required.

Where an understorey or vertical structure is absent, understorey species such as hawthorn, elm, hazel or holly will be introduced alongside canopy thinning where required. To be advised by an ecologist.

Felled trees from elsewhere in the scheme with a diameter of over 20m should be used to create deadwood piles though the woodland, the location of which will be advised by an ecologist. Informed by arboricultural assessment, any failing / moribund trees will be made safe and retained in-situ to provide standing deadwood.

Paths through the woodland to allow public access will be formalised to prevent trampling damage, and planting along these paths should include higher concentration of understory species to discourage access into the body of the woodland.

Management targets –

1. Non-native and invasive species account for less than 5%
2. There is a diverse age and height structure of the trees.
3. Large dead branches/stems and stumps are present.
4. There should be no evidence of inappropriate management (e.g. deep ruts, animal poaching or compaction).
- 5.

Modified grassland to Other Neutral Grassland (Area D)

Target – Moderate condition

Prior to commencement the areas of grassland to be retained and enhanced should be separated from construction areas to avoid unintentional destruction.

In Autumn in the first year of works the existing grassland should be scarified to open-up bare soil suitable for seed germination prior to autumn over sowing with Emorsgate EM3F 'Special General Purpose Wild Flowers' mix.

Following initial seeding, mowing should continue as needed aiming to keep the grass short (30-50mm). Continue mowing/grazing through winter and early spring as needed. Stop mowing/grazing in April and leave until July/August, once yellow rattle has set seed.

After flowering in July or August take a 'hay cut': cut back with a scythe, petrol strimmer or tractor mower to c.50mm. Leave the 'hay' to dry and shed seed for 1-7 days then remove from site. Mow or graze the re-growth through to late autumn/winter to c 50mm and again in spring if needed.

Management targets –

1. Total cover of wildflowers and sedges greater than 30%, excluding white clover, creeping buttercup and injurious weeds.
2. Rye-grass cover is less than 25%
3. Cover of undesirable species²⁴ at 5- 15%.

²⁴ Species indicative of suboptimal condition for this habitat type include: creeping thistle *Cirsium arvense*, spear thistle *Cirsium vulgare*, curled dock *Rumex crispus*, broad-leaved dock *Rumex obtusifolius*, common nettle *Urtica dioica*, creeping buttercup *Ranunculus repens*, greater plantain *Plantago major*, white clover *Trifolium repens* and cow parsley *Anthriscus sylvestris*.

9. Monitoring

Monitoring Schedule

- 9.1. To deliver BNG, a robust strategy is critical to monitor successes and identify any adaptive management measures. Routine monitoring informs progress and facilitates the required management plan updates at set intervals.
- 9.2. As outlined in Section 5, approval has been granted for the first five years of the landscape establishment. Maintenance tasks are outlined and incorporated into **Table 6**, which shows the suggested Monitoring Methods and Intervals. A detailed schedule is included in **Appendix D**.
- 9.3. Adaptive Monitoring will be implemented to evaluate the effectiveness of management actions then adjusting as necessary to improve outcomes over time. Management actions will be followed by targeted monitoring outcomes. These, in turn, will inform the ongoing management. Observations and notes from day-to-day management will be kept and inform changes in management prescriptions, then through to subsequent monitoring reports.

Table 6: Monitoring Methods and Intervals

Monitoring Methods and Intervals		
Monitoring Methods	Monitoring Interval and Timing	Comments
Summary Report (Year 1)	End of Year 1	<p>Confirm the implementation of the landscaping design including hedgerow and tree planting, and woodland.</p> <p>Grassland monitoring visit in growing season in the year proceeding sowing – fixed point quadrat data to be collected to allow year on year comparison. Species lists and comparison against target species.</p> <p>Ensure pictures taken (fixed point photography).</p> <p>Issue end of Year 1 report.</p>
Site Maintenance Visits (Year 1, 2, 3, 4 and 5) – Approval already granted	Years 1-5	<p>Grass cutting 1m back from path edge - 12x visits per year</p> <p>Grass cutting - 6x visits per year</p> <p>Grass cutting to wildflower meadow/woodland edges - 2x visits per year (early spring and after flowering).</p> <p>Selective weed control - 6x visits per year</p> <p>Maintenance hedge cutting - 2x visits per year.</p> <p>Maintain shrubs and beds (weeding, pruning etc) 6x visits per year with thinning, shrub control and debris removal - 1x per year after the second year.</p> <p>Check mulch mats and replace as necessary - 6x visits per year</p> <p>Check tree health and condition (including formative pruning to maintain shape) - 6x visits per first 3x years (year 1,2 and 3 only)</p> <p>Check all trees condition and health including stakes, ties, tubes and maintenance including pruning, thinning, repairing wounds 6 visits per year, year 4 and 5 only.</p> <p>Removal of litter and debris - 6x visits per year.</p> <p>Check and repair rabbit fence as required - 6x visits per year with removal of rabbit fence in area D only during 5th year.</p>

Monitoring Methods and Intervals		
Monitoring Methods	Monitoring Interval and Timing	Comments
		<p>Replacement of plant losses (provisional sum) - 1x per year in next available planting season.</p> <p>Defects / maintenance visit with Project Manager / client and associated written report / list - 1x per year in next available planting season.</p>
<p>Site visits: removal of INNS /undesirable species and compile a full species list of the habitat.</p> <p>Summary Reports (Year 2, 3, 4 and 5)</p>	<p>Annually May/ June for years 1-5</p>	<p>Monitor planting failure and highlight where replacement is required to management company, identify any INNS/ undesirable species²⁵ which frequently return.</p> <p>Compile a species list of the habitat annually - fixed point quadrat data to be collected to allow year on year comparison. Recommend over sowing of target species where required.</p> <p>Identify establishment towards target UK habitat classification category/condition – data to feed into Year 10 report.</p> <p>Seek professional help if there are areas of concern.</p> <p>Ensure pictures taken annually for comparison.</p> <p>Issue concise annual summary reports during establishment period. Year 5 report to clarify if establishment period (years 1-5) needs extending e.g. due to further planting within establishment period.</p>
<p>Site visits: removal of INNS /undesirable species and compile a full species list of the habitat.</p>	<p>May/ June for every 2 years, for years:5-10</p>	<p>Monitor species, identify any INNS/ Undesirable species which frequently return. Compile a species list of the habitat.</p> <p>Over sow with grassland flower seed where required. Fixed point quadrat data to be collected to allow year on year comparison.</p> <p>Identify establishment towards target UK habitat classification category/condition – data to feed into Year 10 report.</p> <p>Seek professional advice if there are areas of concern.</p> <p>Ensure pictures are taken annually for comparison.</p>
<p>Summary Report (Year 10)</p>	<p>After above visit</p>	<p>Compare all data collected on Site (Year 1-5 and Year 10) including the continual species lists produced each time on Site.</p> <p>1x1m fixed point quadrat data to be collected to allow year on year comparison</p> <p>Evaluate the target UK habitat Classification and habitat condition progression. Check against target habitats in this BEMP. Identify remedial action if required to meet target categories and conditions.</p> <p>Identify the requirement for management interventions to control undesirable species or reduce nutrient levels in the grassland.</p>
<p>Site visit and summary report</p> <p>Identification of remedial measures if required.</p>	<p>Year 20 and 30 (April- June)</p>	<p>BNG Audit every 10 years to evaluate and confirm target UK habitat classification category and condition is being achieved.</p> <p>Recommendations for intervention measures where required to achieve habitat targets.</p> <p>Consult with specialist if the target habitat category/condition is not being met to implement additional measures. BNG audit to note the INNS and plant health levels.</p>

²⁵ General species indicative of suboptimal condition: creeping thistle *Cirsium arvense*, spear thistle *Cirsium vulgare*, curled dock *Rumex crispus*, broad-leaved dock *Rumex obtusifolius*, common nettle *Urtica dioica*, Creeping buttercup *Ranunculus repens*, greater plantain *Plantago major*, white clover *Trifolium repens* and cow parsley *Anthriscus sylvestris*.

Risks

- 9.4. Risks are inevitably associated with any project where its success is based on a number of interventions to achieve BNG. Considering risks within habitat management and monitoring plans is crucial to selecting the right habitat interventions, minimise negative impacts, ensure BNG is achieved, comply with legislation and policy, optimise resource allocation, enhance resilience and enable adaptive management. By identifying and addressing risks, the Client can effectively plan for and mitigate potential threats to achieving the aims and objectives set out within the BEMP.
- 9.5. See **Appendix B** for some general risks associated with the management and monitoring of habitats relevant to the Project and how these have and proposed to be managed in this BEMP.

10. Conclusion

- 10.1. In conclusion, the BEMP and supporting documents presented in this report serves as a valuable tool for achieving a 10% BNG within the Site. By outlining roles and responsibilities, providing baseline habitat information, and offering management and monitoring measures, the BEMP sets a framework for how the newly created and enhanced habitats can reach their target condition and biodiversity value.
- 10.2. This BEMP provides the information required by the planning condition outlined at the start of this document.

Appendix

A. Management and Monitoring Schedules

B. Risks Associated with Habitat Creation and Management

There are a number of natural and human induced risks and constraints currently present which have the potential to affect the ongoing management and ecological value of the Site.

Risk Register

The tables below detail habitat specific risks associated with achieving the target habitats.

Table 7: Risk Register for Grassland and Woodland

Risk	Trigger for action	Remedial action
Disturbance	Human disturbance can result in trampling, compaction of soils or the introduction of dogs' faeces changing soil pH. Unrestricted and undirected access can result in reduction in diversity of grassland and woodland via disturbance.	Consider interpretation boards to explain the habitat creation targets. In grassland areas signage can be erected in the growing season to explain the habitat management. The mowing of paths which direct pedestrian movement through the grassland can reduce trampling. The installation of dog waste, and general waste bins in pedestrian areas / footpaths can reduce the risk of eutrophication of habitats.
Failed planting	Failed whips during woodland / hedgerow planting identified during monitoring visits.	Replacement planting and identification of reason for failure and implement corrective action e.g. review of species and soil/climate suitability (see below), browsing protection etc.
Climate change and severe weather incidents affecting establishment of target habitats/condition over time.	Monitoring visits of woodland and grassland identify failure of meeting target habitats, attributed to severe weather.	Replacement planting / sowing as required to account for changes in local climate, in order to meet target habitats and deliver predicted units. Implementation of drainage or watering regimes as/if required.
Establishment of invasive or undesirable species.	Presence of INNS identified during monitoring visits. High proportions (5-15%) of undesirable species in grasslands	Herbicide spot treatment or hand pulling as appropriate.
Inappropriate management of areas within the BEMP resulting in target habitats not being achieved	Monitoring visits identify that management interventions appear not to have been implemented appropriately in target areas.	Review of communication with landscape contractors and availability of clear plans identifying areas to be managed in accordance with this BEMP compared to other management regimes in local or adjacent areas.

C. Drawings

D. Approved Establishment Schedule for Planting (Years 1-5)

Planting	YEAR 1 Rectification period x12 maintenance visits	YEAR 2	YEAR 3	YEAR 4	YEAR 5
Grass cutting on verges / path edges/cycle way edge 1 metre back from path edge. <ul style="list-style-type: none"> a) removal of stones, litter, undesirable and deleterious material. b) cutting around obstacles and between plants. c) strimming d) sweeping e) cutting edges f) re-forming edges g) disposal of material 	1m width cut to 50mm every 3 weeks during growing season. 12x visits per year	1m width cut to 50mm every 3 weeks during growing season. 12x visits per year	1m width cut to 50mm every 3 weeks during growing season. 12x visits per year	1m width cut to 50mm every 3 weeks during growing season. 12x visits per year	1m width cut to 50mm every 3 weeks during growing season. 12x visits per year
Grass cutting on verges/path edges/cycle way edge. <ul style="list-style-type: none"> a) removal of stones, litter, undesirable and deleterious material b) cutting around obstacles and between plants c) strimming d) sweeping e) cutting edges f) re-forming edges g) disposal of material 	6x visits per year	6x visits per year	6x visits per year	6x visits per year	6x visits per year
Grass cutting to wildflower meadow/woodland edges. <ul style="list-style-type: none"> a) removal of stones, litter, undesirable and deleterious material b) hoeing and raking c) cutting d) measures to avoid uprooting desirable vegetation. e) disposal of material 	2 x per year annual spring summer cut-after flowering	2 x per year annual spring summer cut-after flowering	2 x per year annual spring summer cut-after flowering	2x per year annual spring summer cut-after flowering	2 x per year annual spring summer cut-after flowering
Weeding by hand or spray etc. <ul style="list-style-type: none"> a) Selective weed control. b) Weed control by spot application. c) Hand weeding. Cutting weeds. To planted areas, grassed areas, to wildflower areas, to shrubs. 	6 x visits per year during growing season	6 x visits per year during growing season	6 x visits per year during growing season	6 x visits per year during growing season	6 x visits per year during growing season

Planting	YEAR 1 Rectification period x12 maintenance visits	YEAR 2	YEAR 3	YEAR 4	YEAR 5
Maintain hedge line: hedge cutting/pruning remove clippings, litter debris and foreign objects.	2 x visits per year	2 x visits per year	2 x visits per year	2 x visits per year	2 x visits per year
Maintain shrubs and beds; hand weed; prune annually; maintain edges; sweep soil or mulch spills back onto bed.	6x visits per year	6x visits per year	6x visits per year. Year 3 - pruning shrubs: thinning, scrub control, remove clippings and debris 1x per year	6x visits per year. Year 3 - pruning shrubs: thinning, scrub control, remove clippings and debris 1x per year	6x visits per year. Year 3 - pruning shrubs: thinning, scrub control, remove clippings and debris 1x per year
Check all mulch mats, re-peg or replace as necessary.	6x visits per year	6x visits per year	6x visits per year	6x visits per year	6x visits per year
Check all trees for health and condition; check all tubes, ties and stakes and re-firm ground; repair damage, including hedgerow.	6 x visits per year	6 x visits per year	6 x visits per year Formative pruning to retain shape of trees		
Check all trees condition and health; check tubes, ties and stakes and re-firm ground; repair damage. Including hedgerow; Tree maintenance to include: (a) pruning; (b) dealing with damage to limbs and boles; (c) repairing bark wounds; (d) probing cavities; (e) removal of debris and loose decayed wood from cavities; (g) removal of foreign objects; (h) severance of climbing plants; (i) crown lifting, thinning, reduction and reshaping; (j) disposal of material (l) inspections and reports.	-	-	-	6 x visits per year	6 x visits per year
Remove litter, detritus from the planting site, remove off-site.	6 x visits per year	6 x visits per year	6 x visits per year	6 x visits per year	6 x visits per year
Top up all mulch levels.	1 x every year to the base of	1 x every year to the	1 x every year to the	1 x every year to the	1 x every year to the base of

Planting	YEAR 1 Rectification period x12 maintenance visits	YEAR 2	YEAR 3	YEAR 4	YEAR 5
	the hedge line 75mm thickness (annual)	base of the hedge line 75mm thickness (annual)	base of the hedge line 75mm thickness (annual)	base of the hedge line 75mm thickness (annual)	the hedge line 75mm thickness (annual)
Check and repair rabbit fence as required.	6x visits	6x visits	6x visits	6x visits	6x visits Removal of all rabbit fence (Area D Only) by the end of the maintenance period
Replacement of plant losses (provisional sum)	1 x per year in next available planting season	1 x per year in next available planting season	1 x per year in next available planting season	1 x per year in next available planting season	1 x per year in next available planting season
Defects / maintenance visit with Project Manager / client and associated written report / list.	1 x per year	1 x per year	1 x per year	1 x per year	1 x per year

We are Waterman, where every project matters

We deliver progressive, sustainability-driven environmental and engineering consultancy services across every sector. We think differently, and we're harnessing our collective expertise to deliver greener, healthier and well-connected communities, networks and built environments.

Based in strategic locations throughout the UK and Ireland, our team of specialists is at the forefront of tackling the climate emergency and forging a path to a Net Zero built environment.

UK & Ireland Office Locations

