



e3p

Biodiversity Metric Report

West Starkey Street, Heywood

Reference: 81-361-R3-1

Date: July 2023



BIODIVERSITY METRIC REPORT

West Starkey Street,
Heywood

Prepared for:
Tilboursy Douglas Construction Ltd

Report Ref: 81-361-R3-1
Date Issued: 26/07/2023

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QUALITY ASSURANCE

PROJECT NUMBER	81-361		
VERSION	Version 1		
REMARKS	Final		
DATE	July 2023		
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QUALIFICATIONS	BSc (Hons), MSc, MEnvSc, CEnv, MCIEEM, Associate Director		

EXECUTIVE SUMMARY

Site Address	West Starkey Street, Heywood, OL10 4TW				
Co-ordinates	E 385133, N 411125				
Site Area	Approximately 1.25 ha				
Current Site Use	The site comprised a disused area of grassland to the west of Heywood Sports Village. A sports pitch lies to the north, with West Starkey Street defining the site's southern boundary and residential housing lying to the west of the site. The site is surrounded by predominantly residential and commercial development associated with the town of Heywood.				
Proposed Development	Development proposals include the construction of a school building, with associated hardstanding car parks and sports pitches. A wildflower meadow and orchard are also proposed along the site's western boundary.				
Results	The biodiversity metric results show a gain of habitat and hedgerow units as follows: <table> <tr> <td>Habitat Units</td><td>+0.40</td></tr> <tr> <td>Hedgerow Units</td><td>+1.04</td></tr> </table> A gain of 12.92% in habitat units and a gain of 63.53% in hedgerow units will be incurred on-site as a result of development.	Habitat Units	+0.40	Hedgerow Units	+1.04
Habitat Units	+0.40				
Hedgerow Units	+1.04				
Conclusions and Recommendations	The proposed scheme and proposed site plans show a total gain of 0.40 habitat units and 1.04 hedgerow units as a result of the development. A net gain in habitat and hedgerow units has therefore achieved on-site. However, the proposed plans do not satisfy the habitat or hedgerow trading rules, as equivalent habitats have not been 'traded up'. This could be achieved by converting 0.1 ha of the proposed wildflower meadow to moderate condition mixed scrub. Additionally, converting 0.068 km of the proposed species-rich native hedgerow to species-rich native hedgerow with trees will satisfy the trading rules. Additional species enhancements could be provided on-site, which could include bat and bird boxes, hedgehog houses and hibernacula.				



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1. INTRODUCTION

1.1. BACKGROUND

E3P has been instructed Tilboury Douglas Construction Ltd to undertake a Biodiversity Metric Calculation at West Starkey Street, Heywood, hereafter referred to as “the site”.

This report has been produced by Zach Squire-Watt BSc (Hons) QCIEEM, Graduate Ecologist at E3P. Zach has experience undertaking Biodiversity Net Gain and Condition Assessments on a variety of projects across the UK.

This report should be read in conjunction with ‘Biodiversity Metric 4.0 Calculation Tool – West Starkey Street, Heywood.xl’.

1.2. PREVIOUS SURVEYS

E3P undertook a Preliminary Ecological Appraisal on-site in July 2023 (report reference: 81-361-R2). The survey included a Condition Assessment of the on-site habitats. During the survey, the site was found to comprise poor semi-improved grassland, dense scrub, tall ruderal, hedgerow with trees and a treeline. Scattered trees were also present in the south-eastern and south-western corners of the site. The site was also assessed as having value for breeding birds, bats, badgers (*Meles meles*), common amphibians and hedgehogs (*Erinaceus europaeus*).

1.3. SITE LOCATION

The site is located within the predominantly residential and commercial town of Heywood. West Starkey Street defines the site’s southern boundary, Cedar Avenue defines the western boundary, and a playing field associated with Heywood Sports Village defines the northern boundary. Bury Street, a section of the A58, lies approximately 250 m south of site, and the River Roch lies approximately 370 m north-west at its closest point. Please refer to Figure 1.1 for the approximate site location.



FIGURE 1.1 APPROXIMATE SITE LOCATION



1.4. OBJECTIVES

The objectives of the Biodiversity Metric are to:

- 🏠 Identify percentage change in on-site habitat.
- 🏠 Identify the number of habitat units lost/gained on-site; and
- 🏠 Determine the need for a conservation offset payment or off-site habitat creation.

The findings of the calculation are detailed within this report, along with recommendations.



2. METHODOLOGY

2.1. BIODIVERSITY METRIC

Department for Environment, Food and Rural Affairs' (DEFRA) Biodiversity Metric 4.0 2023 version was used to undertake the metric calculation. The metric was undertaken following guidance as detailed within The Biodiversity Metric 4.0 User Guide (Natural England, 2023), the Biodiversity Metric 4.0 Technical Supplement (Natural England, 2022) and the Summary of Changes Biodiversity Metric 3.1 to 4.0 (2023).

This metric was calculated by Zach Squire-Watt. Zach has experience undertaking Biodiversity Net Gain assessments for a range of projects and using the Biodiversity Metric Calculation Tool.

This metric was reviewed by Associate Director Celia Barlow, BSc (Hons) MSc MEnvSc CEnv MCIEEM. Celia has undertaken a number of online training courses with CIEEM including 'Calculating and Using Biodiversity Units with Metric 2.0' and 'Biodiversity Net Gain Through Development'. Celia has also completed Condition Assessments on a number of sites across the UK and holds a Level 3 Field Identification Skills Certificate (FISC).

2.2. ON-SITE HABITAT BASELINE DATA

The baseline data used to inform the condition assessment was collected on 10th July 2023 during the Preliminary Ecological Appraisal. The Biodiversity Metric 4.0 – Technical Annex 1 – Condition Assessment Sheets and Methodology (Natural England 2023) was used to undertake the condition assessment. The methodology follows the Biodiversity Metric 4.0 – User Guide (Natural England 2023).

On-site baseline habitats were measured off the Phase 1 Habitat Plan using QGIS. The Root Protection Areas (RPAs) of scattered trees were taken from the Arboricultural Impact Assessment and Method Statement produced by E3P in 2023 (81-361-R1). Please see Appendix I for the Phase 1 Habitat Plan.

Phase 1 habitat types were translated into UKHab habitat types using the metrics Technical Data Translation Tool.

2.3. POST DEVELOPMENT HABITAT CREATION

The Proposed Site Plan was used to measure potential habitat creation on-site (Elis Williams, 2021, Drawing reference: FS0911-EWA-ZZ-ZZ-D-A-9001). The areas of proposed habitat were measured using QGIS from the PDF drawing.

Please see Appendix II for the Proposed Site Plan.

2.4. LIMITATIONS

Some areas on the site are double counted, including root protection zones and areas of habitat, where overlap is shown. This means areas of habitat pre- and post-development do not total to the same area.



3. RESULTS

3.1. ON-SITE BASELINE CONDITION ASSESSMENT RESULTS

Table 3.1 shows the details of the habitat condition assessment used for input into the metric calculation tool.

TABLE 3.1 HABITAT BASELINE CONDITION ASSESSMENT RESULTS

HABITAT TYPE (PH1)	HABITAT TYPE (UKHAB)	AREA/LENGTH (HA/KM)	CONDITION ASSESSMENT	DESCRIPTION
POOR SEMI-IMPROVED GRASSLAND	Grassland- Modified Grassland	1.0976	Poor	Fails criteria 1 which is essential to achieve a Moderate-Good score.
DENSE SCRUB	Heathland and Shrub- Willow Scrub	0.0685	Poor	Passes 2 of 5 condition assessment criteria: - There is an absence of invasive non-native plant species (as listed on Schedule 9 of WCA) and species indicative of sub-optimal condition make up less than 5% of ground cover. - The scrub has a well-developed edge with scattered scrub and tall grassland and or forbs present between the scrub and adjacent habitat.
TALL RUDERAL	Sparsely vegetated land- Ruderal/Ephemeral	0.0827	Poor	Passes 1 of 3 condition assessment criteria: The habitat parcel contains different plant species that are beneficial for wildlife, for example flowering species providing nectar sources for a range of invertebrates at different times of the year.



HABITAT TYPE (PH1)	HABITAT TYPE (UKHAB)	AREA/LENGTH (HA/KM)	CONDITION ASSESSMENT	DESCRIPTION
HEDGEROW WITH TREES	Species-rich native hedgerow with trees	0.1045	Moderate	No more than 4 failures in total; and does not fail both attributes in more than one functional group. Please see Appendix III for full condition assessment criteria.
TREELINE	Line of trees	0.0971	Moderate	Passes 3 of 5 condition assessment criteria: - At least 70% of trees are native species. - Tree canopy is predominantly continuous with gaps in canopy cover making up >10% of total area and no individual gap being >5 m wide. - At least 95% of the trees are in a healthy condition (deadwood or veteran features valuable for wildlife are excluded from this). There is little or no evidence of an adverse impact on tree health by damage from livestock or wild animals, pests or diseases, or human activity.

3.2. HABITAT RETENTION CONDITION ASSESSMENT

The habitats associated with the treeline in the west of the site are being retained. A small section of hedgerow will require removal to facilitate proposals. Table 3.2 outlines the area of habitat being retained.



TABLE 3.2 HABITAT RETENTION CONDITION ASSESSMENT RESULTS

HABITAT TYPE (LANDSCAPE PLAN)	HABITAT TYPE (UKHAB)	AREA (HA)	CONDITION ASSESSMENT	DESCRIPTION
POOR SEMI-IMPROVED GRASSLAND	Grassland- Modified grassland	0.0797	Poor	Please see Appendix III for full condition assessment criteria.
DENSE SCRUB	Heathland and shrub-Willow scrub	0.0527	Poor	Please see Appendix III for full condition assessment criteria.
TALL RUDERAL	Sparsely vegetated land-ruderal/Ephemeral	0.0428	Poor	Please see Appendix III for full condition assessment criteria.
HEDGEROW WITH TREES	Species-rich native hedgerow with trees	0.0994	Moderate	No more than 4 failures in total; and does not fail both attributes in more than one functional group. Please see Appendix III for full condition assessment criteria.
TREELINE	Line of trees	0.0971	Moderate	Passes 3 of 5 condition assessment criteria: - At least 70% of trees are native species. - Tree canopy is predominantly continuous with gaps in canopy cover making up >10% of total area and no individual gap being >5 m wide. - At least 95% of the trees are in a healthy condition (deadwood or veteran features valuable for wildlife are excluded from this). There is little or no evidence of an adverse impact on tree health by damage from livestock or wild animals, pests or diseases, or human activity.



3.3. HABITAT CREATION CONDITION ASSESSMENT

Habitats are indicated on the Proposed Plan, which include the creation of a school building with associated hardstanding, amenity grassland and wildflower meadow. Table 3.3 shows the details of the target condition assessment and total areas of habitat creation. It has been assumed that there will be no significant delay in the creation of the proposed habitat features, as such the delay in starting habitat creation has been set to zero.

TABLE 3.3 HABITAT CREATION CONDITION ASSESSMENT RESULTS

HABITAT TYPE (LOCATION PLAN)	HABITAT TYPE (UKHAB)	AREA (HA)/ LENGTH (KM)	TARGET CONDITION	DESCRIPTION/ TARGET TIME TO CONDITION
BUILDINGS/ HARDSTANDING	Urban- Developed land; sealed surface	0.6130	N/A	N/A
ORNAMENTAL SHRUB PLANTING	Urban- Introduced shrub	0.0116	N/A	N/A
SPECIES RICH MEADOW GRASSLAND	Grassland- Other neutral grassland	0.1490	Moderate	Passes all condition assessment criteria, including criterion A that is essential for achieving Moderate or Good condition. Target time to condition will be 5 years.
AMENITY GRASSLAND	Grassland- Modified grassland	0.3000	Poor	Fails condition assessment criterion 1 which is essential for achieving Moderate or Good condition. Target time to condition will be one year.
NATIVE SPECIES HEDGE MIX	Species-rich native hedgerow	0.1650	Moderate	Please refer to Appendix IV for full condition assessment criteria. Target time to condition will be 5 years.



HABITAT TYPE (LOCATION PLAN)	HABITAT TYPE (UKHAB)	AREA (HA)/ LENGTH (KM)	TARGET CONDITION	DESCRIPTION/ TARGET TIME TO CONDITION
NEW TREE PLANTING	Individual trees – Urban tree (13, medium size)	0.4764	Moderate	Passes condition assessment criteria A, B, C and F. Target time to condition will be 27 years.



3.4. STRATEGIC SIGNIFICANCE

The strategic significance was defined as 'Area not in local strategy, no local strategy'. The site comprised a disused area of grassland bordered by scrub and hedgerow. Due to the developed nature of the surrounding area, the site is not anticipated to have significant ecological value.

3.5. BIODIVERSITY UNIT RESULT

The headline results of the metric show a gain of 0.40 habitat units and a gain of 1.04 hedgerow units as a result of development. Table 3.4 shows the headline results detailed within the Biodiversity Metric.

TABLE 3.4 HEADLINE RESULTS

HEADLINE	CATEGORY	RESULT
TOTAL NET UNIT CHANGE	Habitat Units	+0.40
	Hedgerow Units	+1.04
	River Units	N/A
TOTAL NET % CHANGE	Habitat Units	+12.92%
	Hedgerow Units	+63.53%
	River Units	N/A

However, the trading rules of the metric have not been satisfied as habitats lost have not been 'traded up'.



4. CONCLUSIONS AND RECOMMENDATIONS

The proposed scheme and proposed site plans show a total gain of 0.40 habitat units and a gain of 1.04 hedgerow units as a result of the development. A net gain in habitat and hedgerow units has therefore been achieved on site.

In order to satisfy the trading rules, habitats must be 'traded up'. This can be achieved by replacing 0.1 ha of the proposed wildflower meadow with moderate condition mixed scrub. Additionally, in order to satisfy the hedgerow trading rules, it is recommended that 0.068 km of the proposed species-rich native hedgerow be replaced by species-rich native hedgerow with trees. The ideal location for this is within the north-eastern corner of the site, where hedgerow defines the site's boundaries and the inclusion of trees will not impact the site.

Proposed plans include the planting of 13 medium trees. In order for the medium trees to achieve their target condition and size, the trees planted must be a girth of between 18-20 cm. Please note, the proposed scattered trees can be included anywhere on-site providing at least 20% of their canopy cover is oversailing vegetation.

The Biodiversity Metric does not take account for additional species enhancements within the site, and to further increase the site's value for wildlife the following could be provided:

-  Creation of hibernacula (following guidance set out within Froglife, 2001) for common amphibians.
-  Hedgehog houses may be installed to enhance the site for hedgehogs.
-  Bat and bird boxes could be integrated into the proposed residential units.



5. REFERENCES

- ✚ elliswilliams (2021). Proposed Site Plan. Drawing Reference: FS0911-EWA-ZZ-ZZ-D-A-9001.
- ✚ E3P (2023). Arboricultural Impact Assessment and Report (81-361-R1).
- ✚ E3P (2023). Preliminary Ecological Appraisal (81-361-R1).
- ✚ National Planning Policy Framework (2021). Ministry of Housing, Communities and Local Government.
- ✚ Natural England Joint Publication JP039. (2023). The Biodiversity Metric 4.0. User Guide. Technical Annex 2.
- ✚ Natural England Joint Publication JP039. (2023). The Biodiversity Metric 4.0. User Guide.
- ✚ Natural England. (2023). The Biodiversity Metric 4.0. Technical Annex 1. Condition Assessment Sheets.

END OF REPORT



APPENDIX I

PHASE 1 HABITAT PLAN

Key:

— Site boundary

Dense scrub

Poor semi-improved grassland

Tall ruderal

Treeline

Hedgerow

Scattered trees

Field horsetail

Notes

Issue: 1	Revision: 1	Date: 10/07/2023	Drawn: ZSW	Authorised: CB
Client: Tilbourn Douglas Construction			Job No. 81-361	Date: 10/07/2023
			Drawing No. 81-361-001	Scale: 1 : 1200 @A4
Job title: West Starkey Street, Heywood			Drawing title: Phase 1 Habitat Plan	



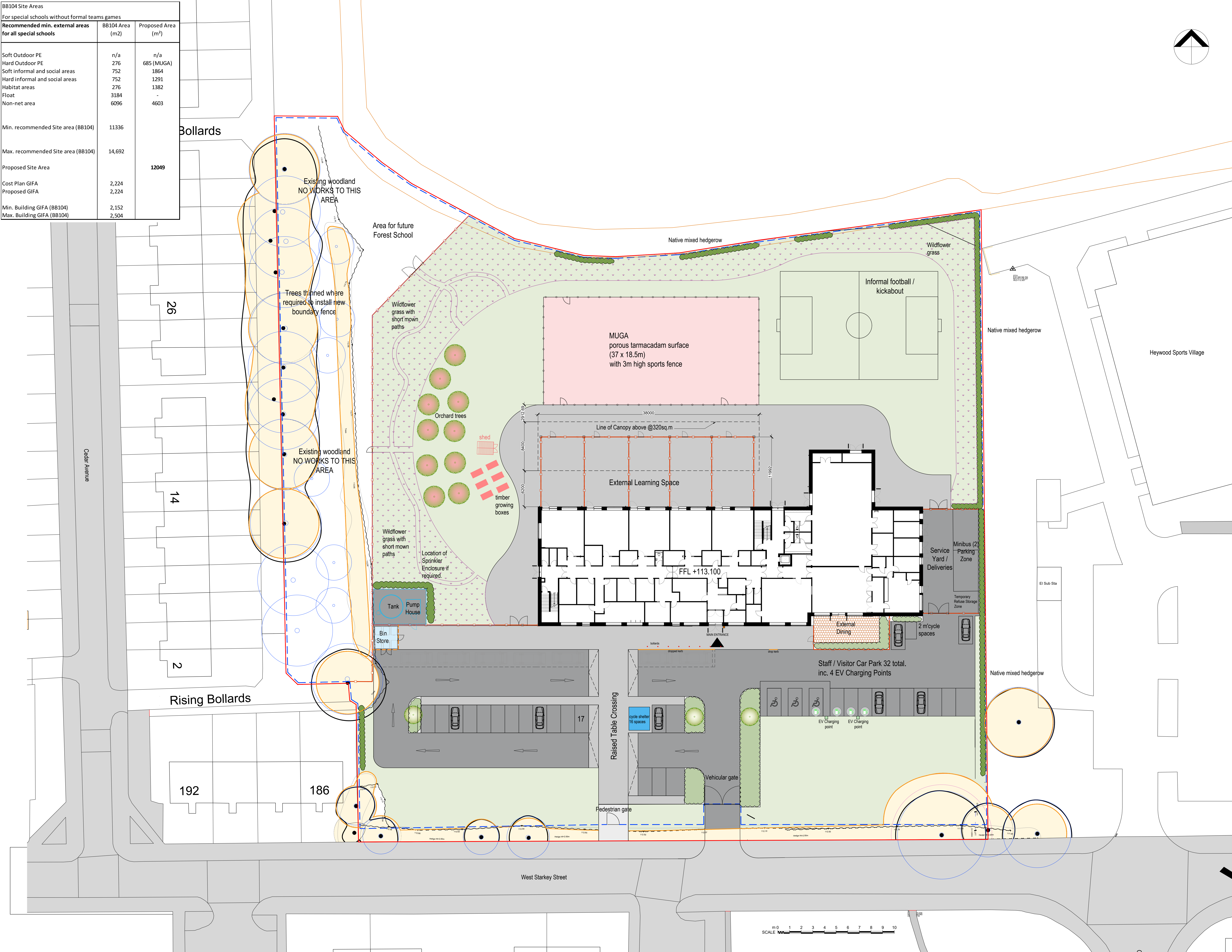
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APPENDIX II

PROPOSED SITE PLAN

BB104 Site Areas		
For special schools without formal teams games		
Recommended min. external areas for all special schools	BB104 Area (m2)	Proposed Area (m²)
Soft Outdoor PE	n/a	n/a
Hard Outdoor PE	276	685 (MUGA)
Soft informal and social areas	752	1864
Hard informal and social areas	752	1291
Habitat areas	276	1382
Float	3184	-
Non-net area	6096	4603
Min. recommended Site area (BB104)	11336	
Max. recommended Site area (BB104)	14,692	
Proposed Site Area		12049
Cost Plan GIFA	2,224	
Proposed GIFA	2,224	
Min. Building GIFA (BB104)	2,152	
Max. Building GIFA (BB104)	2,504	



NOTES

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Rev	Date	Notes	By	CHK
01	18.10.21	Final issue	NH	AS
02	18.10.21	Revised Plan	NH	AS
03	18.10.21	Revised Plan	NH	AS
04	18.10.21	Final issue	NH	AS
05	18.10.21	Final issue	NH	AS
06	18.10.21	Final issue	NH	AS
07	18.10.21	Final issue	NH	AS
08	18.10.21	Final issue	NH	AS
09	18.10.21	Final issue	NH	AS
10	18.10.21	Final issue	NH	AS
11	18.10.21	Final issue	NH	AS
12	18.10.21	Final issue	NH	AS
13	18.10.21	Final issue	NH	AS
14	18.10.21	Final issue	NH	AS
15	18.10.21	Final issue	NH	AS
16	18.10.21	Final issue	NH	AS
17	18.10.21	Final issue	NH	AS
18	18.10.21	Final issue	NH	AS

KEY

- Vehicular grade Asphalt Concrete
- Pedestrian grade macadam
- Multi Use Games Area macadam
- Existing trees retained and protected during construction
- Root Protection Areas
- New tree planting
- Amenity grass over 150mm depth topsoil
- Species rich meadow grassland over 150mm depth low fertility topsoil
- Ornamental shrub planting into 300mm depth topsoil
- Existing woodland retained
- Native species hedge mix into 300mm depth topsoil
- 2.4m high Palatin style steel weld mesh fencing
- 2m high Palatin style steel weld mesh fencing
- 3m high steel weld mesh sports fencing
- 3m High timber/composite hit and miss vertical pale fencing
- Existing levels
- Items under budget review
- Red line site boundary
- Designated Parking for Electric Vehicle Charging (Enc.)
- EV charging point (200 units, each with 200 @ A0)

WIP

Williams

Project Name: 2718
Project Name: 911 Heywood SEND

Drawing Status: S3
Drawing Number: F50911-EWA-ZZ-ZZ-D-A-0001
Drawing Name: Proposed Site Plan
Date: 10.10.21
Drawn By: NH

Rev: P8
Scale: 1:100 @ A0

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APPENDIX III
CONDITION ASSESSMENT
CRITERIA- BASELINE
HABITATS

SPECIES-RICH NATIVE HEDGEROW WITH TREES

ATTRIBUTES AND FUNCTIONAL GROUPINGS (A, B, C, D & E)		CRITERIA (THE MINIMUM REQUIREMENTS FOR 'FAVOURABLE CONDITION')	DESCRIPTION	CONDITION ACHIEVED (Y/N)
A1.	Height	>1.5 m average along length	The average height of woody growth estimated from base of stem to the top of shoots, excluding any bank beneath the hedgerow, any gaps or isolated trees. Newly laid or coppiced hedgerows are indicative of good management and pass this criterion for up to a maximum of four years (if undertaken according to good practice). A newly planted hedgerow does not pass this criterion (unless it is > 1.5 m height).	Y
A2.	Width	>1.5 m average along length	The average width of woody growth estimated at the widest point of the canopy, excluding gaps and isolated trees. Outgrowths (e.g. blackthorn suckers) are only included in the width estimate when they >0.5 m in height. Laid, coppiced, cut and newly planted hedgerows are indicative of good management and pass this criterion for up to a maximum of four years (if undertaken according to good practice).	Y



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ATTRIBUTES AND FUNCTIONAL GROUPINGS (A, B, C, D & E)		CRITERIA (THE MINIMUM REQUIREMENTS FOR 'FAVOURABLE CONDITION')	DESCRIPTION	CONDITION ACHIEVED (Y/N)
B1.	Gap - hedge base	Gap between ground and base of canopy <0.5 m for >90% of length (unless 'line of trees')	This is the vertical gappiness of the woody component of the hedgerow, and its distance from the ground to the lowest leafy growth. Certain exceptions to this criterion are acceptable (see page 65 of the Hedgerow Survey Handbook).	Y
B2.	Gap - hedge canopy continuity	Gaps make up <10% of total length and No canopy gaps >5 m	This is the horizontal gappiness of the woody component of the hedgerow. Gaps are complete breaks in the woody canopy (no matter how small). Access points and gates contribute to the overall gappiness, but are not subject to the >5 m criterion (as this is the typical size of a gate).	Y
C1.	Undisturbed ground and perennial vegetation	>1 m width of undisturbed ground with perennial herbaceous vegetation for >90% of length: - measured from outer edge of hedgerow, and - is present on one side of the hedge (at least)	This is the level of disturbance (excluding wildlife disturbance) at the base of the hedge. Undisturbed ground should be present for at least 90% of the hedgerow length, greater than 1m in width and must be present along at least one side of the hedge. This criterion recognises the value of the hedge base as a boundary habitat with the capacity to support a wide range of species. Cultivation, heavily trodden footpaths, poached ground etc. can limit available habitat niches.	Y
C2.	Undesirable perennial vegetation	Plant species indicative of nutrient enrichment of soils dominate <20% cover of the area of undisturbed ground	The indicator species used are nettles (<i>Urtica spp.</i>), cleavers (<i>Galium aparine</i>) and docks (<i>Rumex spp.</i>). Their presence, either singly or together, should not exceed the 20% cover threshold.	N



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ATTRIBUTES AND FUNCTIONAL GROUPINGS (A, B, C, D & E)		CRITERIA (THE MINIMUM REQUIREMENTS FOR 'FAVOURABLE CONDITION')	DESCRIPTION	CONDITION ACHIEVED (Y/N)
D1.	Invasive neophyte species and	>90% of the hedgerow and undisturbed ground is free of invasive non-native and neophyte species	Neophytes are plants that have naturalised in the UK since AD 1500. For information on neophytes see the JNCC website and for information on invasive non-native species see the GB Non-Native Secretariat website.	N
D2.	Current damage	>90% of the hedgerow or undisturbed ground is free of damage caused by human activities	This criterion addresses damaging activities that may have led to or lead to deterioration in other attributes. This could include evidence of pollution, piles of manure or rubble, or inappropriate management practices (e.g. excessive hedge cutting).	Y
For hedgerow with trees only				
E1.	Tree age	At least one mature tree per 30m stretch of hedgerow. A mature tree is one that is at least 2/3 expected fully mature height for the species.	This criterion addresses if there are sufficient mature trees (within the scope of planning timescales) which are of higher value to biodiversity.	N



ATTRIBUTES AND FUNCTIONAL GROUPINGS (A, B, C, D & E)		CRITERIA (THE MINIMUM REQUIREMENTS FOR 'FAVOURABLE CONDITION')	DESCRIPTION	CONDITION ACHIEVED (Y/N)
E2.	Tree health	At least 95% of hedgerow trees are in a healthy condition (excluding veteran features valuable for wildlife). There is little or no evidence of an adverse impact on tree health by damage from livestock or wild animals, pests or diseases, or human activity.	This criterion identifies if the trees are subject to damage which compromises the survival and health of the individual specimens.	Y

POOR SEMI-IMPROVED GRASSLAND

CONDITION ASSESSMENT CRITERIA		CONDITION ACHIEVED (Y/N)
A	"There are 6-8 vascular plant species per m2 present, including at least 2 forbs (this may include those listed in Footnote 1). Note - this criterion is essential for achieving Moderate or Good condition. Where the vascular plant species present are characteristic of medium, high or very high distinctiveness grassland, or there are 9 or more of these characteristic species per m2 (excluding those listed in Footnote 1), please review the full UKHab description to assess whether the grassland should instead be classified as a higher distinctiveness grassland. Where a grassland is classed as medium, high, or very high distinctiveness, please use the relevant condition sheet.	N



CONDITION ASSESSMENT CRITERIA		CONDITION ACHIEVED (Y/N)
B	Sward height is varied (at least 20% of the sward is less than 7 cm and at least 20% is more than 7 cm) creating microclimates which provide opportunities for vertebrates and invertebrates to live and breed.	N
C	"Some scattered scrub (including bramble <i>Rubus fruticosus</i> agg.) may be present, but scrub accounts for less than 20% of total grassland area. Note - patches of scrub with continuous (more than 90%) cover should be classified as the relevant scrub habitat type.	Y
D	Physical damage is evident in less than 5% of total grassland area. Examples of physical damage include excessive poaching, damage from machinery use or storage, erosion caused by high levels of access, or any other damaging management activities.	Y
E	Cover of bare ground is between 1% and 10%, including localised areas (for example, a concentration of rabbit warrens)2.	N
F	Cover of bracken <i>Pteridium aquilinum</i> is less than 20%.	
G	There is an absence of invasive non-native plant species (as listed on Schedule 9 of WCA).	



DENSE SCRUB

CONDITION ASSESSMENT CRITERIA		CONDITION ACHIEVED (Y/N)
A	"The scrub is a good representation of the habitat type it has been identified as, based on its UKHab description (where in its natural range). The appearance and composition of the vegetation closely matches the characteristics of the specific scrub type. At least 80% of scrub is native, and there are at least three native woody species¹, with no single species comprising more than 75% of the cover (except hazel <i>Corylus avellana</i>, common juniper <i>Juniperus communis</i>, sea buckthorn <i>Hippophae rhamnoides</i> or box <i>Buxus sempervirens</i>, which can be up to 100% cover).	N
B	Seedlings, saplings, young shrubs and mature (or ancient or veteran ²) shrubs are all present.	N
C	There is an absence of invasive non-native plant species ³ (as listed on Schedule 9 of WCA ⁴) and species indicative of sub-optimal condition ⁵ make up less than 5% of ground cover.	Y
D	The scrub has a well-developed edge with scattered scrub and tall grassland and or forbs present between the scrub and adjacent habitat.	Y
E	There are clearings, glades or rides present within the scrub, providing sheltered edges.	N



TALL RUDERAL

CONDITION ASSESSMENT CRITERIA		CONDITION ACHIEVED (Y/N)
A	Vegetation structure is varied, providing opportunities for vertebrates and invertebrates to live, eat and breed. A single structural habitat component or vegetation type does not account for more than 80% of the total habitat area.	N
B	The habitat parcel contains different plant species that are beneficial for wildlife, for example flowering species providing nectar sources for a range of invertebrates at different times of year.	N
C	"Invasive non-native plant species (listed on Schedule 9 of WCA1) and others which are to the detriment of native wildlife (using professional judgement) ² cover less than 5% of the total vegetated area ³ . Note - to achieve Good condition, this criterion must be satisfied by a complete absence of invasive non-native species (rather than <5% cover)."	Y



APPENDIX IV CONDITION ASSESSMENT CRITERIA-PROPOSED HABITATS

NATIVE SPECIES HEDGE MIX

ATTRIBUTES AND FUNCTIONAL GROUPINGS (A, B, C, D & E)		CRITERIA (THE MINIMUM REQUIREMENTS FOR 'FAVOURABLE CONDITION')	DESCRIPTION	CONDITION ACHIEVED (Y/N)
A1.	Height	>1.5 m average along length	The average height of woody growth estimated from base of stem to the top of shoots, excluding any bank beneath the hedgerow, any gaps or isolated trees. Newly laid or coppiced hedgerows are indicative of good management and pass this criterion for up to a maximum of four years (if undertaken according to good practice). A newly planted hedgerow does not pass this criterion (unless it is > 1.5 m height).	Y
A2.	Width	>1.5 m average along length	The average width of woody growth estimated at the widest point of the canopy, excluding gaps and isolated trees. Outgrowths (e.g. blackthorn suckers) are only included in the width estimate when they >0.5 m in height. Laid, coppiced, cut and newly planted hedgerows are indicative of good management and pass this criterion for up to a maximum of four years (if undertaken according to good practice).	Y
B1.	Gap - hedge base	Gap between ground and base of canopy <0.5 m for >90% of length (unless 'line of trees')	This is the vertical gappiness of the woody component of the hedgerow, and its distance from the ground to the lowest leafy growth. Certain exceptions to this criterion are acceptable (see page 65 of the Hedgerow Survey Handbook).	Y



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ATTRIBUTES AND FUNCTIONAL GROUPINGS (A, B, C, D & E)		CRITERIA (THE MINIMUM REQUIREMENTS FOR 'FAVOURABLE CONDITION')	DESCRIPTION	CONDITION ACHIEVED (Y/N)
B2.	Gap - hedge canopy continuity	Gaps make up <10% of total length and No canopy gaps >5 m	This is the horizontal gappiness of the woody component of the hedgerow. Gaps are complete breaks in the woody canopy (no matter how small). Access points and gates contribute to the overall gappiness but are not subject to the >5 m criterion (as this is the typical size of a gate).	N
C1.	Undisturbed ground and perennial vegetation	>1 m width of undisturbed ground with perennial herbaceous vegetation for >90% of length: - measured from outer edge of hedgerow, and - is present on one side of the hedge (at least)	This is the level of disturbance (excluding wildlife disturbance) at the base of the hedge. Undisturbed ground should be present for at least 90% of the hedgerow length, greater than 1m in width and must be present along at least one side of the hedge. This criterion recognises the value of the hedge base as a boundary habitat with the capacity to support a wide range of species. Cultivation, heavily trodden footpaths, poached ground etc. can limit available habitat niches.	N
C2.	Undesirable perennial vegetation	Plant species indicative of nutrient enrichment of soils dominate <20% cover of the area of undisturbed ground	The indicator species used are nettles (<i>Urtica spp.</i>), cleavers (<i>Galium aparine</i>) and docks (<i>Rumex spp.</i>). Their presence, either singly or together, should not exceed the 20% cover threshold.	Y
D1.	Invasive neophyte species	>90% of the hedgerow and undisturbed ground is free of invasive non-native and neophyte species	Neophytes are plants that have naturalised in the UK since AD 1500. For information on neophytes see the JNCC website and for information on invasive non-native species see the GB Non-Native Secretariat website.	Y



ATTRIBUTES AND FUNCTIONAL GROUPINGS (A, B, C, D & E)		CRITERIA (THE MINIMUM REQUIREMENTS FOR 'FAVOURABLE CONDITION')	DESCRIPTION	CONDITION ACHIEVED (Y/N)
D2.	Current damage	>90% of the hedgerow or undisturbed ground is free of damage caused by human activities	This criterion addresses damaging activities that may have led to or lead to deterioration in other attributes. This could include evidence of pollution, piles of manure or rubble, or inappropriate management practices (e.g. excessive hedge cutting).	Y

