FLEET STREET, HOLBEACH

BIODIVERSITY METRIC ASSESSMENT

A Report to: Aldi Stores Limited

Report No: RT-MME-158436-03-RevB

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REPORT VERIFICATION AND DECLARATION OF COMPLIANCE

This study has been undertaken in accordance with British Standard 42020:2013 "Biodiversity, Code of practice for planning and development".

Report Version	Date	Completed by:	Checked and approved by:
Final	13/10/2022	Wilmie van Rooyen (Biodiversity Consultant)	Richard Wheat ACIEEM (Principal Consultant)
Rev A	20/10/2022	Wilmie van Rooyen (Biodiversity Consultant)	Dr Amanda Flint (Biodiversity Manager)
Rev B	13/01/2023	Wilmie van Rooyen (Biodiversity Consultant)	Ellie Rickman MSc, MCIEEM (Principal Ecological Consultant)

The information which we have prepared is true, and has been prepared and provided in accordance with the Chartered Institute of Ecology and Environmental Management's Code of Professional Conduct. We confirm that the opinions expressed are our true and professional bona fide opinions.

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1. INTRODUCTION

1.1 PROJECT BACKGROUND

In July 2022, Aldi Stores Ltd commissioned Middlemarch Environmental Ltd to undertake a Biodiversity Metric Assessment associated with a proposed development at Fleet Street, Holbeach in Lincolnshire.

The assessment is informed by ecological works carried out at the site in September-October 2022 by Middlemarch. These are:

- Preliminary Arboricultural Assessment (RT-MME-157409-01),
- Preliminary Ecological Appraisal (RT-MME-158436-01); and,
- Preliminary Roost Assessment (RT-MME-158436-02).

1.2 PROJECT SCOPE

The purpose of the Biodiversity Metric Assessment (BMA) is to identify the change in biodiversity value that may result from a change in land use (e.g., development) or management (e.g., biodiversity enhancement) at the site and to establish if a net gain for biodiversity can be achieved. The BMA utilises a biodiversity metric to provide a proxy measure of biodiversity based on habitat attributes, which can then be used to determine the relative change in biodiversity value resulting from any land use or management measures proposed.

It should be noted that the metric is only a proxy for biodiversity using habitat values, and that any proposed enhancements should be designed using appropriate ecological expertise. Existing levels of protection afforded to protected species and to habitats are not changed by use of the metric and statutory obligations will still need to be satisfied. In addition, the metric cannot account for impacts on, or enhancements to, irreplaceable habitats or protected sites, which will need to be assessed separately.

1.3 SITE DESCRIPTION AND CONTEXT

Table 1.1 provides a brief summary of the site and its surroundings.

Attribute	Description
Location	Holbeach is a market town and civil parish in the South Holland District of Lincolnshire.
National Grid Reference	TF 36413 24708
Site Area (ha)	0.88 ha
Topography	Flat
Land Cover (on site)	The site was dominated by hardstanding, with five buildings/structures also present. Pockets of scrub were present, particularly in the north-east, south-east and west of the site and poor, semi-improved grassland with associated hedgerow and scattered trees was present to the north-east. Scattered introduced shrub was recorded throughout the site.
Land Cover (site surrounds)	The wider landscape was dominated by residential housing with associated gardens to all sides. The residential properties to the north were separated from the study site by Fleet Street, which ran parallel to the northern site boundary. Two large waterbodies (comprising Fishpond Lane Nature Reserve) were located approximately 60 m and 130 m west of the study site, beyond the residential properties associated with Rathkenny Close.

Table 1.1: Summary of Site and Surroundings

1.4 DESCRIPTION OF DEVELOPMENT

The proposed development will comprise the construction of a new ALDI store on site, with associated access roads, parking areas and soft landscaping. It is understood that three existing trees along the eastern boundary of the site are to be retained and incorporated into the scheme.

This assessment is based on the documentation detailed in the following documentation listed in Table 1.2.

Document / Drawing Number	Author
MEL-535-001 P3 Landscaping ALDI Fleet Street Holbeach 10.01.23	Middlemarch

Table 1.2: Details of the proposed development

2. METHODS

2.1 BIODIVERSITY METRIC

The biodiversity calculations used within this assessment were undertaken by Wilmie van Rooyen (Biodiversity Consultant) with revisions undertaken by Ellie Rickman (Principal Ecological Consultant) using 'The Biodiversity Metric 3.1' and associated User Guide[1] and Technical Supplement[2]. Sections 2.2 and 2.3 describe the data used for the assessment and the assumptions applied.

2.2 DATA SOURCES

2.2.1 Existing Baseline

The baseline habitat data and condition assessment for the site is taken from the Preliminary Ecological Appraisal (PEA) (Report RT-MME-158436-01) carried out by Middlemarch in October 2022. A Phase 1 Habitat map showing the extent and location of each habitat recorded on site is included in Section 5 (C158436-01-01).

The Biodiversity Metric 3.1 calculator tool utilises the UK Habitat Classification System (UKHab) as the standard data input for habitats. The Phase 1 Habitat Survey data for the site was subsequently converted for the purposes of the metric calculation using the Phase 1 habitats to UKHab translation feature, included in the Biodiversity Metric 3.1 calculator tool, or using professional opinion.

Each habitat or linear feature recorded within the site is assigned a score for 'Distinctiveness', 'Condition' and 'Strategic Significance'. Table 2.1 below describes how each habitat attribute has been determined for the existing baseline habitats in the metric assessment.

Attribute	Description
Distinctiveness	An automated score based on the type of habitat present and its value to wildlife. Highly diverse habitats such as those listed as Habitats of Principal Importance under the NERC Act (2006) or Annex 1 habitats in the Habitats Directive (1992) score highly in this category, whilst highly modified and low diversity habitats such as arable crops will have low distinctiveness scores.
Condition	A score based on the quality of the habitat parcel against published condition criteria (See PEA report RT-MME-158436-01)
Strategic significance	A score based on information set out in local plans or policies. In this instance, local planning policy and strategic planning documents were scrutinised, and the site was not identified as being in an area which has been strategically prioritised.

Table 2.1 – Habitat attributes for existing baseline habitats

The value of each habitat parcel (or linear feature) is presented in terms of habitat (or hedgerow/river) 'biodiversity units' (BU).

2.2.2 Future Baseline

The future baseline conditions of the site are based on the proposed Detailed Landscaping (Drawing MEL-535-001 P3 by Middlemarch). Table 2.2 below describes how each habitat attribute has been determined for the future baseline habitats in the metric assessment.

Attribute	Description
Distinctiveness	An automated score based on professional opinion about the projected habitat type proposed, taking into account the landscaping proposals detail in Drawing MEL-535-001 P3 by Middlemarch which shows the detailed soft landscape proposals for the site.
Condition	A target condition score of the proposed habitat parcel based on professional opinion about the outline enhancement and future management proposals.
Strategic significance	A score based on information set out in local plans or policies. In this instance, local planning policy and strategic planning documents were scrutinised, and the site was not identified as being in an area which has been strategically prioritised.

[1] Panks, S., White, N., Newsome, A., Nash, M., Potter, J., Heyton, M., Mayhew, E., Alvarez, M., Russell, T., Cashon, C., Goddard, F., Scott, S.J., Heaver, M., Scott, S.H., Treweek, J., Butcher, B. and Stone, D. (2022) T*he Biodiversity Metric 3.1 – Auditing and accounting for biodiversity: User Guide*. Natural England.

[2] Panks, S., White, N., Newsome, A., Nash, M., Potter, J., Heyton, M., Mayhew, E., Alvarez, M., Russell, T., Cashon, C., Goddard, F., Scott, S.J., Heaver, M., Scott, S.H., Treweek, J., Butcher, B. and Stone, D. (2022) T*he Biodiversity Metric 3.1 – Auditing and accounting for biodiversity: Technical Supplement*. Natural England.

Table 2.2 - Habitat attributes for existing baseline habitats (Continues)

Attribute	Description
Time to Target Condition	Time to target condition is automatically assigned in accordance with the Biodiversity Metric Tool 3.1. This multiplier can be adapted manually to reflect situations where a habitat is created in advance or where there is a delay in the project timescales for new habitat creation (e.g., project phasing).
Difficulty of Recreation	An automated value based on the difficulty of creating the target habitat. This value is unchanged from the values generated in Metric 3.1.

Table 2.2 - Habitat attributes for existing baseline habitats (Continued)

Following the calculation of the existing and future biodiversity value of the site, a calculation of the net biodiversity change is carried out to determine the 'post-intervention habitat (or hedgerow/river) units', along with a figure for the percentage of net biodiversity impact loss (or gain).

2.3 CONSTRAINTS AND ASSUMPTIONS

The following constraints and assumptions are applied to this report:

- For the purposes of this report, the term 'Habitat Loss' is applied to proposals that result in a change of habitat type or habitat 'distinctiveness'. This is defined in the Biodiversity Metric even where the new habitat type is created without any physical loss of the previous habitat type (e.g., creation of scrub over grassland). 'Habitat Enhancement' is applied where the habitat type and 'distinctiveness' remains the same, but the 'condition' of the habitat is improved.

- The BMA necessitates an estimation of future baseline values, based on professional opinion, to determine the change in biodiversity value that could occur as a result of the proposals at the site. The assumptions about target habitat types or condition in this report are based on professional opinion about the likely achievable outcomes at the site, based on the proposed planting plans and presumed management resources. All target habitats presume the implementation of a long-term Management Plan to achieve these ends and a recommendation to this effect is given in Section 4 below.

- The area of any new urban trees proposed is calculated using the Street Tree Helper (as described above). For the purposes of this assessment, all new urban trees proposed are assumed to be small (below 1/3 of their life expectancy).

3. BIODIVERSITY METRIC ASSESSMENT

3.1 EXISTING HABITATS

The habitats identified during the Preliminary Ecological Appraisal are described in Table 3.1 and their value in biodiversity units is provided. The current extent of the habitats present is shown in Drawing C158436-01-01 in Section 5. The baseline metric calculations are provided in Appendix A.

Phase 1 Habitat	UKHab Habitat Equivalent	Area (ha) / Length (km)	Description (distinctiveness, condition, and strategic significance)	Value (Biodiversity Units)
Area Based Habitats				
Buildings / Hardstanding	Developed land; sealed surface	0.59	Automatically classed as being of 'Very Low' distinctiveness. Condition assessments are not applicable, and this habitat is considered to be of 'Low' strategic significance.	0.00
Dense scrub	Mixed scrub	0.04	Automatically classed as 'Medium' distinctiveness and has been assessed to be in 'Moderate' condition with 'Low' strategic significance.	0.32
Dense scrub	Mixed scrub	0.11	Automatically classed as 'Medium' distinctiveness and has been assessed to be in 'Poor' condition with 'Low' strategic significance.	0.44
Poor semi-improved grassland	Modified grassland	0.02	Automatically classed as 'Low' distinctiveness and has been assessed to be in 'Poor' condition with 'Low' strategic significance.	0.04
Poor semi-improved grassland	Other neutral grassland	0.05	Automatically classed as 'Medium' distinctiveness and has been assessed to be in 'Poor' condition. This habitat is considered to be of 'Low' strategic significance.	0.20
Tall ruderal vegetation	Other neutral grassland	0.006	Automatically classed as 'Medium' distinctiveness and has been assessed to be in 'Poor' condition. This habitat is considered to be of 'Low' strategic significance.	0.02
Other habitat: rubble	Artificial unvegetated, unsealed surface	0.04	Automatically classed as being of 'Very Low' distinctiveness. Condition assessments are not applicable, and this habitat is considered to be of 'Low' strategic significance.	0.00
Other habitat: dense ivy-covered ground	Bramble scrub	0.01	Bramble scrub has been used as the closest habitat type in terms of distinctiveness and structure. It is automatically classed as 'Medium' distinctiveness. Condition assessments are not applicable for bramble dominated scrub. This habitat is considered to be of 'Low' strategic significance.	0.04
Scattered trees	Urban tree	0.0366*	One medium urban tree which is automatically classed as 'Medium' distinctiveness and has been assessed to be in 'Good' condition and is considered to be of 'Low' strategic significance.	0.44
	Total Area (ha)	**0.86**	**Total Site Baseline (Biodiversity Units)**	**1.50**
Linear Habitats (Hedgerows and Tree Lines)				
Intact hedge	Non-native ornamental hedgerow	0.022	This habitat is automatically classed as being of 'Very Low' distinctiveness and 'Poor' condition and this habitat is considered to be of 'Low' strategic significance.	0.02
Scattered trees	Line of Trees	0.014	This habitat is automatically classed as being of 'Low' distinctiveness, was assessed to be in 'Moderate' condition and is considered to be of 'Low' strategic significance.	0.06
	Total Area (km)	**0.04**	**Total Site Baseline (Biodiversity Units)**	**0.08**

Table 3.1: Summary of existing habitats and linear

3.2 FUTURE BASELINE AND IMPACTS

3.2.1 Description of the future baseline

The future baseline for the purposes of this assessment is set out in the proposed Detailed Landscaping (Drawing MEL-535-001 P3 by Middlemarch). An adapted version of this map is included in Section 5 (Drawing C158436-03-01-RevB) showing how each landscaping area has been translated to a habitat type for the purpose of Biodiversity Metric Assessment.

3.2.2 Impacts

Table 3.2 outlines the potential biodiversity impacts of the proposed development (including area proposed for retention, retained for enhancement, or habitats that are lost).

Phase 1 Habitat	UKHab Habitat	Habitats Retained		Habitat retained for Enhancement		Habitat Loss	
		Area/ Length (Ha/Km)	Value (BU)	Area/ Length (Ha/Km)	Value (BU)	Area/ Length (Ha/Km)	Value (BU)
Area based habitats							
Buildings / Hard-standing	Developed land; sealed surface	0.00	0.00	0.00	0.00	0.59	0.00
Dense scrub	Mixed scrub	0.00	0.00	0.00	0.00	0.04	0.32
Dense scrub	Mixed scrub	0.03	0.12	0.00	0.00	0.08	0.32
Poor semi-improved grassland	Modified grassland	0.00	0.00	0.00	0.00	0.02	0.04
Poor semi-improved grassland	Other neutral grassland	0.00	0.00	0.00	0.00	0.05	0.20
Tall ruderal vegetation	Other neutral grassland	0.00	0.00	0.00	0.00	0.01	0.02
Other habitat: rubble	Artificial unvegetated, unsealed surface	0.00	0.00	0.00	0.00	0.04	0.00
Other habitat: dense ivy-covered ground	Bramble scrub	0.00	0.00	0.00	0.00	0.01	0.04
Scattered trees	Urban tree	0.0366*	0.44	0.00	0.00	0.00	0.00
Total Impact (Area habitats)		**0.03***	**0.56**	**0.00**	**0.00**	**-0.84**	**-0.94**
Linear Habitats (Hedgerows and Tree Lines)							
Intact hedge	Non-native ornamental hedgerow	0.00	0.00	0.00	0.00	0.02	0.02
Scattered trees	Line of Trees	0.00	0.00	0.00	0.00	0.01	0.06
Total Impacts (Linear habitats)		**0.00**	**0.00**	**0.00**	**0.00**	**0.04**	**0.08**
Key * Habitat area of trees not included in total area							

Table 3.2: Summary of impacts

3.3 HABITAT CREATION / ENHANCEMENT

Table 3.3 below outlines the value of the proposed habitat creation/ enhancements in the development proposals.

Landscape typology	UKHab Habitat	Area (ha) / Length (km)	Description (target distinctiveness, condition, connectivity strategic significance and risk multipliers)	Value (Biodiversity Units)
Habitats				
Bare mulch areas	Artificial unvegetated, unsealed surface	0.01	Comprises organic bark mulch laid over weed control membrane at the peripheries between hardstanding and ornamental shrub planting. The habitat type is automatically assessed as being 'Very low' distinctiveness and due to the limited attributes for biodiversity is not assigned a condition.	0.00
Buildings and hardstanding	Developed land; sealed surface	0.69	Comprises the new area of built development. The habitat type is automatically assessed as being 'Very low' distinctiveness and due to the limited attributes for biodiversity is not assigned a condition.	0.00
Native shrub planting	Mixed scrub	0135	Native shrub planting around retained scrub along the western boundary and in an area on the eastern boundary near retained trees. The habitat is automatically classed as being 'Medium' distinctiveness and is considered to achieve a 'Moderate' condition.	0.90
Specimen tree	Urban Tree	0.0732*	Comprises 18 small specimen trees some of which are proposed to be native species and others will be commercial varieties. It is considered that the trees will achieve a 'Moderate' condition due to positioning within the development and future management.	0.22
Total Creation (Area habitats)		**0.84***	**Total Value (Area Habitats)**	**+1.13**
Hedgerows				
Native mixed species hedge planting	Native Species Rich Hedgerow	0.06	To be planted mainly on the southern and eastern site boundaries. The habitat is automatically classed as being 'Medium' distinctiveness and is considered to be able to achieve a 'Moderate' condition due to composition, management, and positioning within development.	0.40
Total Creation (Hedgerow)		**0.06**	**Total Value (Hedgerow)**	**+0.40**
Key * Habitat area of trees not included in total area				

Table 3.3: Summary of habitat creation and enhancement proposals (Continued)

3.4 HEADLINE RESULTS

Table 3.4 details the headline results. Full details of the biodiversity metric calculations can be found in Appendix A.

	Habitat units	Hedgerow units
On-site baseline	1.50	0.08
On-site post-intervention	1.69	0.40
Total net unit change	+0.18	+0.32
Total net % change	**12.21%**	**414.97%**

Table 3.4: Biodiversity metric assessment – headline results

4. DISCUSSION AND RECOMMENDATIONS

4.1 CONCLUSIONS

Biodiversity Change

Net Gains-Area Habitats
The BMA identifies that the proposed development will result in a net gain of **0.18 BU** (Habitats) which is equivalent to an increase of 12.21% on the existing baseline habitat values. This achieves the target 10% net gain advocated by the Environment Act 2021.

The proposed gains in area habitat are achieved through the creation of native scrub habitats in the landscaped areas of the site. However, a total of 0.22 BU of the biodiversity unit losses on site are from grassland habitats. Therefore although an overall gain has been achieved, the site constraints mean that grassland habitat loss have not been fully accounted for, and the trading rules, which state that habitat gains should be in like-for-like habitat or better, have not been met.

Continued management over a minimum period of 30 years will be required for all proposed created habitat to ensure that the target condition of 'Moderate' is achieved and maintained in the long-term.

Net Gains- Hedgerow Habitats
The BMA identified that the proposed development will result in a net gain of **0.32 BU** in hedgerow value which gives a large gain of over 400% on the baseline. This gain compensates for all loss of hedgerow and tree line features and exceeds the 10% net gain in hedgerow value advocated by the Environment Act 2021. This ensures that the proposed development is compliant with planning policy for hedgerow features (subject to long-term management).

Landscape and Ecology Management Plan

The projected on-site habitat values given in this report are based on the assumption that an appropriate management plan will be implemented to ensure that the habitats and hedgerow features will be established and maintained to fulfil their intended biodiversity value. Biodiversity Net Gain Principles[5] necessitates that any biodiversity units claimed must be deliverable over a minimum period of 30 years. As such, the recommended management plan must provide long-term management proposals and provide scope for monitoring and reporting, to demonstrate that the intended values will be achieved over a minimum 30-year period. A recommendation to this effect is included in Section 4.2 below.

4.2 RECOMMENDATIONS

R1 A Landscape and Ecology Management Plan (LEMP) should be produced for all habitats and hedgerow features proposed within the site. The LEMP should set out the appropriate establishment works, and management prescription required to achieve and maintain the intended type and condition of each habitat and hedgerow feature proposed. The LEMP should cover a minimum period of 30 years and include provisions for monitoring, review, reporting and contingency throughout. The LEMP could be produced as part of a planning condition for the proposed development.

[5] CIRIA, CIEEM, IEMA (2016) *Biodiversity Net Gain: Good Practice Principles for Development* [Available https://cieem.net/wp-content/uploads/2019/02/Biodiversity-Net-Gain-Principles.pdf]

5. DRAWINGS

Drawing C158436-01-01 – Phase 1 Habitat Survey

Drawing C158436-03-01-RevB - Drawing Adaptation of Landscape Proposal for Purposes of the BMA



Legend

- Site boundary
- Scattered scrub
- Scattered shrub
- Scattered tree
- Fence
- Species-poor intact hedgerow
- Wall
- Building
- Dense scrub
- Hardstanding
- Other habitat
- SI Poor semi-improved grassland
- Tall ruderal
- Target note

Project	Fleet Street, Holbeach
Drawing	Phase 1 Habitat Map
Client	STOAS Architects
Drawing Number	C158436-01-01
Revision	00
Scale @ A3	1:600
Date	September 2022
Approved By	CR
Drawn By	CD

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C158436-01-01

0 25 50 m

Legend

- Development boundary
- Proposed tree
- Retained tree
- Removed tree
- Native species-rich hedge
- Bare mulch
- Building/hardstanding
- Native shrub planting
- Retained habitat

Project	Fleet Street, Holbeach
Drawing	Landscape Proposals Plan
Client	STOAS Architects
Drawing Number	C158436-03-01-RevB
Revision	Rev B
Scale @ A3	1:600
Date	January 2023
Approved By	CR
Drawn By	GT/BD

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APPENDICES

Appendix A - Biodiversity Metric 3.1 Calculation, Fleet Street, Holbeach

(*Attached separately*)